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U. S. Department of Agriculture

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This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

Washington, D. C. January 31, 1920.

MONTHLY LIST OF PUBLICATIONS.

[JANUARY, 1920.]

READ CAREFULLY BEFORE ORDERING.

Send no remittances to the U.S. Department of Agriculture.

A copy of any of the publications listed herein, except those otherwise noted. may be obtained free upon application to the Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

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FARMERS' BULLETINS-FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

Cattle-Fever Ticks and Methods of Eradication. By W. P. Ellenberger and Robert M. Chapin. Pp. 32, figs. 5. Contribution from the Bureau of Animal Industry. January, 1920. (Farmers' Bulletin 1057, Revised.)

Supersedes Bureau of Animal Industry Circular 207, and Farmers' Bulletin 498 and

Harvesting and Storing Ice on the Farm. By John T. Bowen, Dairy Division. Pp. 31, figs. 30. Contribution from the Bureau of Animal Industry. January, 1920. (Farmers' Bulletin 1078.)

A revision of Farmers' Bulletin 623.

Dusting Machinery for Cotton Boll Weevil Control. By Elmer Johnson, Agricultural Engineer, Bureau of Public Roads, and B. R. Coad, Entomological Assistant, Bureau of Entomology. Contribution from the Bureau of Entomology. January, 1920. (Farmers' Bulletin 1098.)

This bulletin is intended to aid the prospective purchaser of dusting machinery for cotton boll weevil control in selecting a satisfactory model and one adapted to the needs of his particular farming conditions.

DEPARTMENTAL BULLETINS-TECHNICAL.

In The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information, as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

A Chemical Study of the Ripening and Pickling of California Olives. By R. W. Hilts, Chief of Western Food and Drug Inspection District, and R. S. Hollingshead, Junior Chemist, San Francisco Station. Pp. 24, pls. 5, figs. 24. Contribution from the Bureau of Chemistry. Jan. 24, 1920. (Department Bulletin 803.) Price, 10 cents.

Describes results of an investigation of methods of pickling ripe olives in California.

The Broad-Bean Weevil. By Roy E. Campbell, Scientific Assistant, Truck Crop Insect Investigations. Pp. 23, figs. 6. Contribution from the Bureau of Entomology. (Professional Paper.) Jan. 27, 1920. (Department Bulletin 807.) Price, 5 cents.

Describes the life history, habits, and spread of this insect, which is handicapping the growing of broad or horse beans in California.

Street Trees. By F. L. Mulford, Horticulturist, Office of Horticultural and Pomological Investigations. Pp. 58, figs. 37. Contribution from the Bureau of Plant Industry. Jan. 19, 1920. (Department Bulletin 816.) Price, 15 cents.

A discussion of the importance of shade trees for city streets, with a description of the kinds suitable and suggestions for culture and care of them.

Soil Disinfection with Hot Water to Control the Root-Knot Nematode and Parasitic Soil Fungi. By L. P. Byars and W. W. Gilbert, Pathologists, Office of Cotton, Truck, and Forage Crop Disease Investigations. Pp. 14, pls. 5. Contribution from the Bureau of Plant Industry. (Professional Paper.) Jan. 5, 1920. (Department Bulletin 818.) Price, 5 cents.

Describes a practical method for disinfecting small quantities of soil in which to grow healthy seedlings.

Rural Community Buildings in the United States. By W. C. Nason, Assistant in Rural Organization, and C. W. Thompson, Specialist in Rural Organization. Pp. 36, figs. 17. Contribution from the Bureau of Markets. Jan. 30, 1920. (Department Bulletin 825.) Price, 10 cents.

This publication tells the extent of rural club movement, the character of the club houses, the uses to which they are put, and how they are managed and financed.

MISCELLANEOUS.

- Care of Baby Chicks. Boys and Girls Poultry Club Work. Pp. 7, figs. 2. Contribution from Animal Husbandry Division, Bureau of Animal Industry. 1920. (Department Circular 14.) Price, 5 cents.
- How Teachers May Use Farmers' Bulletin 602, Clean Milk: Production and Handling. By Alvin Dille, Specialist in Agricultural Education. Pp. 6. Contribution from the States' Relations Service. January, 1920. (Department Circular 67.)
- How to Break Eggs for Freezing. Pp. 12. Contribution from the Bureau of Chemistry. January, 1920. (Department Circular 74.) Price, 5 cents.
- Suggestions for a State Law Providing for the Organization of Farmers' Mutual Fire Insurance Companies. By V. N. Valgren. Pp. 8. Contribution from the Office of Farm Management. January, 1920. (Department Circular 77.) Price, 5 cents.
- Tropical Fowl Mite in the United States with Notes on Life History and Control. By H. P. Wood, Entomological Assistant, Investigations of Insects Affecting the Health of Man and Animals. Pp. 8, figs. 2. Contribution from the Bureau of Entomology. January, 1920. (Department Circular 79.) Price, 5 cents.
- Safe Farming in the Southern States in 1920. By Bradford Knapp, Chief, Office of Extension Work in the South. Pp. 19. Contribution from the States Relations Service. January, 1920. (Department Circular 85.) Price, 5 cents.
- Potato Diseases in Hawaii and Their Control. By C. W. Carpenter, Plant Pathologist. Pp. 42, pls. 15, figs. 7. Jan. 24, 1920. (Bulletin 45, Hawaii Agricultural Experiment Station.) Price, 20 cents.

SERIALS.

Experiment Station Record. Vol. 41, No. 6. Abstract Number. Jan. 3, 1920. E. W. Allen, Ph. D., Editor. Pp. 501-600. Price, 15 cents.

Same, Vol. 41, No. 7, November, 1919. Pp. 601–700. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Reporter. Vol. 6, No. 1, January, 1920. Pp. 1-8. (Bureau of Crop Estimates.) Price, 25 cents a year.

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock.

ANNOUNCEMENT.—Because of the small fund available for printing it has been found necessary to drop from the mailing list of the Monthly Crop Reporter all names of persons who are not actively cooperating with the United States Department of Agriculture. Persons whose names are dropped may subscribe for this publication through the Superintendent of Documents, Washington, D. C., at the domestic rate of 25 cents per year, and 40 cents per year to foreign addresses, payable only by postal money order or cash. No checks accepted.

The Market Reporter. Vol. 1, Nos. 1 to 5, inclusive, January 3, 10, 17, 24, 31, 1920. Pp. 16. (Bureau of Markets.) For free distribution to applicants who show the need for it.

The Market Reporter is the official marketing publication of the United States Department of Agriculture. It contains general, current, and statistical marketing information for important classes of agricultural products, both staple and perishable, which is of general interest and of permanent value alike to producers, dealers, and consumers.

Weekly News Letter, January, 1920.

Contains a weekly summary in popular form of the more important practical discoveries and recommendations of all bureaus of the department. Free list confined to departmental employees, official cooperators, and the press. May be purchased from the Superintendent of Documents, Government Printing Office, for 50 cents a year.

SERVICE AND REGULATORY ANNOUNCEMENTS-FOR SALE ONLY.

These contain only information, instructions, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. Free distribution is limited to persons in the employ of the department, to public officials, whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale only, at prices noted.

Bureau of Chemistry. No. 24. Pp. 107-126. Jan. 9, 1920. Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 47. No. 10. October, 1919. Jan. 10, 1920. Pp. 691–768, figs. 70, charts 17. Price, 25 cents a copy, \$2.50 a year. Payable to the Superintendent of Documents.

Special Articles: The evolution of the snow-crystal. By J. C. Shedd.—The snowfall of the United States.—Snow and railway transportation. By A. H. Palmer.—Relation of snowfall to the yield of winter wheat. By C. J. Root.—Taylor's theory of atmosphereic turbulence. By E. R. Miller.—The relationship between cirrus movements from easterly points and the occurrence of severe droughts. By Geo. Reeder.—The West India hurricane of September, 1919, in the light of sounding observations. By R. H. Weightman.—Panama thunderstorms. By H. C. Cornthwaite.—Ball lightning at Salina, Kans.—The relation of wind direction to subsequent precipitation in central Ohio. By H. H. Martin.—Kaltenbrunner's statistical method of forecasting.—The flood months in the United States. By A. J. Henry.

National Weather and Crop and Snow and Ice Bulletin. Nos. 1, 2, 3, and 4, January, 1920, reporting weather and crop conditions throughout the United States. Issued weekly. Price, 25 cents a year.

NOTE.—This bulletin is furnished free of charge to public and educational institutions, libraries, newspapers, cooperative observers, weather correspondents, and to those who will post or display it for the general benefit of the public. To all others the price is 25 cents per year, payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

EDWY B. REID, Chief, Division of Publications.

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United States Department of Agriculture,

Washington, D. C., February 28, 1920.

MONTHLY LIST OF PUBLICATIONS.

[February, 1920.]

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FARMERS' BULLETINS-FOR FREE DISTRIBUTION.

MPNOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

Making Woodlands Profitable in the Southern States. By Wilbur R. Mattoon. Extension Specialist in Forestry. Pp. 38, figs. 55. Contribution from the Forest Service. 1920. (Farmers' Bulletin 1071.)

Suggested methods for the care of the farm woodlot and the planting of trees on the waste land of the southern states.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information, as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Studies on the Life History and Habits of the Jointworm Flies of the Genus Harmolita (Isosoma), with Recommendations for Control. By W. J. Phillips, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 27, 168401°-20



pls. 6, figs. 7. Contribution from Bureau of Entomology. (Professional Paper.) Feb. 24, 1920. (Department Bulletin 808.) Price, 5 cents.

Of interest to entomologists generally.

Pears: Production Estimates and Important Commercial Districts and Varieties. By H. P. Gould, Bureau of Plant Industry, and Frank Andrews, Bureau of Crop Estimates. Pp. 16. Contribution from the Bureau of Plant Industry and the Bureau of Crop Estimates. Feb. 25, 1920. (Department Bulletin 822.) Price, 5 cents.

MISCELLANEOUS.

- Organization and Results of Boys' and Girls' Club Work (Northern and Western States), 1918. By O. H. Benson, in Charge of Boys' and Girls' Club Work, and Gertrude Warren, Assistant. Pp. 38, figs. 14. Contribution from the States Relations Service. February, 1920. (Department Circular 66.)
- Directions for Collecting Flowering Plants and Ferns. By S. F. Blake, Botanist. Pp. 8, figs. 3. Contribution from the Bureau of Plant Industry. 1920. (Department Circular 76.) Price, 5 cents.
- Testing Farms in the South for Efficiency in Management. By C. L. Goodrich, Agriculturist. Pp. 27. Contribution from the Office of Farm Management. February, 1920. (Department Circular 83.) Price, 5 cents.
- Crop Injury by Borax in Fertilizers. By Oswald Schreiner, B. E. Brown, and J. J. Skinner, Soil-Fertility Investigations, and M. Shapovalov, Cotton, Truck, and Forage Crop Disease Investigations. Pp. 35, figs. 25. Contribution from the Bureau of Plant Industry. February, 1920. (Department Circular 84.) Price, 10 cents.

SERIALS.

- Journal of Agricultural Research. (For sale only.) Vol. 18, No. 7. January 2, 1920. Contents: Effect of Lime upon the Sodium-Chlorid Tolerance of Wheat Seedlings (tg E-12.) By J. A. LeClerc and J. F. Breazeale.—Relation of Moisture in Solid Substrata to Physiological Salt Balance for Plants and to the Relative Plant-Producing Value of Various Salt Proportions. (tf N. J.-6.) By John W. Shive.—Treatment of Cereal Seeds by Dry Heat. (te Wis.-17.) By D. Atanasoff and A. G. Johnson.—Meat Scraps versus Soybean Proteins as a Supplement to Corn for Growing Chicks. (th Ind.-7.) By A. G. Philips, R. H. Carr, and D. C. Kennard. Pp. 347-398, pls. 13, figs. 8. Price, 30 cents.
- Same, Vol. 18, No. 8. January 15, 1920. Contents: Further Studies of Sorosporella uvella, a Fungous Parasite of Noctuid Larvae. (ti K-79.) By A. T. Speare.—Work and Parasitism of the Mediterranean Fruit Fly in Hawaii during 1918. (tj K-80.) By H. F. Willard.—Cyanogenesis in Sudan Grass: A Modification of the Francis-Connell Method of Determining Hydrocyanic Acid. (tk Okla.-2.) By Paul Menaul and C. T. Dowell. Pp. 399-450, pls. 6. Price, 20 cents.
- Same, Vol. 18, No. 9. February 2, 1920. European Fruit Fly in North America. (tl K-81.) By J. M. Aldrich.—Lepidoptera at Light Traps. (tn K-82.) By W. B. Turner.—Life History of Eubiomyia calosomae, a Tachinid Parasite of Calosoma Beetles. (to K-83.) By C. W. Collins and Clifford E. Hood. Pp. 451-497, pls. 3, figs. 6. Price, 20 cents.
- Same, Vol. 18, No. 10. February 16, 1920. Contents: Determination of Normal Temperatures by Means of the Equation of the Seasonal Temperature Variation and a Modified Thermograph Record. (tp Utah-11.) By F. L. West, N. E. Edlefsen, and S. Ewing.—Temperature Relations of Certain Potato-Rot and Wilt-Producing Fungi. (tm G-183.) By H. A. Edson and M. Shapo-valov.—Germination of Barley Pollen. (tq G-184.) By Stephen Anthony and Harry V. Harlan.—Invertase Activity of Mold Spores as Affected by Concentration and Amount of Inoculum. (tr La.-2.) By Nicholas Kopeloff and S. Byall.—Basal Glumerot of Wheat. (ts G-185.) By Lucia McCulloch. Pp. 499-551, pls. 4, figs. 9. Price, 20 cents.
- Same, Vol. 14, No. 14. September 30, 1920. Contents and Index of Volume 14. Pp. xv, 613-621.
 - MOTE.—Volumes 1 to 4 of the Journal of Agricultural Research were published monthly, volumes 5 to 16 weekly, volume 17 monthly, and volume 18 is being issued semimonthly. The Journal is dsitributed free only to the ligraries of agricultural col-

leges and eperiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$1.50 per year for domestic circulation and \$2 for foreign circulation.

Experiment Station Record. Vol. 41, No. 8, December, 1919. E. W. Allen, Ph. D., Editor. Pp. 701–800. Price, 15 cents.

Note.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Reporter. Vol. 6, No. 2, February, 1920. Pp. 9-20. (Bureau of Crop Estimates.) Price, 25 cents a year.

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock.

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The Market Reporter. Vol. 1, Nos. 6 to 9, inclusive, February 7, 14, 21, 28, 1920. Pp. 16. (Bureau of Markets.) For free distribution to applicants who show the need for it.

The Market Reporter is the official marketing publication of the United States Department of Agriculture. It contains general, current, and statistical marketing information for important classes of agricultural products, both staple and perishable, which is of general interest and of permanent value alike to producers, dealers, and consumers.

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Contains a weekly summary in popular form of the more important practical discoveries and recommendations of all bureaus of the department. Free list confined to departmental employees, official cooperators, and the press. May be purchased from the Superintendent of Documents, Government Printing Office, for 50 cents a year.

SOIL SURVEYS.

APAll requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Linn County, Iowa. By Frank B. Howe and T. H. Benton, of the Iowa Agricultural Experiment Station, and M. Y. Longacre and A. H. Meyer, of the U. S. Department of Agriculture. Pp. 44, fig. 1, map. (From F. O. Soils, 1917.) Price, 15 cents.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain only information, instructions, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. Free distribution is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale only, at prices noted.

Bureau of Animal Industry. No. 152. December, 1919. Pp. 131-146. Feb. 3, 1920. Price, 5 cents.

Bureau of Chemistry, Supplement 62. [N. J. 6551–6600.] Pp. 61–115. Feb. 21, 1920. Price, 10 cents.

Federal Horticultural Board. No. 66. Pp. 117-128. Feb. 19, 1920. Price, 5 cents.

Insecticide and Fungicide Board. No. 27. Pp. 609-640. Feb. 20, 1920. Price, 5 cents.

Bureau of Markets. No. 58. Pp. 6. Feb. 16, 1920. Price, 5 cents.

Same, No. 59. Pp. 15. Feb. 26, 1920. Price, 5 cents.

Same, No. 60. Pp. 7. Feb. 21, 1920. Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 47, No. 11. November, 1919. [Feb. 7, 1920.] Pp. 769-839, figs. 36, charts, 14. Price, 25 cents a copy, \$2.50 a year. Payable to the Superintendent of Documents.

Special articles: Variations in the total and luminous solar radiation with geographical position in the United States. By H. H. Kimball.—Bibliographic note on sunshine in the United States. By R. DeC. Ward.—A new instrument for measuring sky radiation. By A. Angström.—Some problems relating to the scattered radiation from the sky. By A. Angström.—Note on comparisons between pyrheliometers and on the difference between the Angström standard and the Smithsonian standard. By A. Angström.—Comparison of methods for computing daily mean temperatures: Effect of discrepancies upon investigations of climatologists and biologists. By F. Z. Hartzell.—A physical theory of ocean or reservoir temperature distributions regarded as effects of solar radiation, evaporation, and the resulting convection. By G. F. McEwen.—Detecting ocean currents by observing their hydrogen-ion concentration. By A. G. Mayor.—The total solar eclipse of May 29, 1919, at Cape Palmas, Liberia. By L. A. Bauer.—The monsoons of Tunis.—Atmospheric water.

National Weather and Crop and Snow and Ice Bulletin. Nos. 5, 6, 7, and 8,

February, 1920, reporting weather and crop conditions throughout the United States. Issued weekly. Price, 25 cents a year.

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EDWY B. REID, Chief, Division of Publications.

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United States Department of Agriculture.

WASHINGTON, D. C., March 31, 1920.

MONTHLY LIST OF PUBLICATIONS.

[MARCH, 1920.]

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Harlequin Cabbage Bug and Its Control. By F. H. Chittenden, Entomologist in Charge, Truck-Crop Insect Investigations. Pp. 16, figs. 5. Contribution from the Bureau of Entomology. February, 1920. (Farmers' Bulletin 1061.) Of interest to truck growers generally.

Prickly Pear as Stock Food. By David Griffiths, Horticulturist, Office of Horticultural and Pomological Investigations. Pp. 24, figs. 8. Contribution from the Bureau of Plant Industry. March, 1920. (Farmers' Bulletin 1072.) Gives directions for planting, cultivating, harvesting, and feeding prickly pear. Of interest to stock raisers in the arid regions of the southwest.

The California Oak Worm. By H. E. Burke, Specialist, and F. B. Herbert, Scientific Assistant, Forest Insect Investigations. Pp. 14, figs. 9. Contribution from the Bureau of Entomology. February, 1920. (Farmers' Bulletin 1076.) Describes the life history and habits of this insect and suggests methods of control.

The Hessian Fly and How to Prevent Losses from It. By W. R. Walton, Entomologist in Charge, Cereal and Forage Insect Investigations. Pp. 16, figs. 13. Contribution from the Bureau of Entomology. March, 1920. (Farmers' Bulletin 1083.)

Suitable for general distribution. 173165°-20

Control of American Foulbrood. By E. F. Phillips, Apiculturist. Pp. 15, figs. 5. Contribution from the Bureau of Entomology, March, 1920. (Farmers' Bulletin 1084.)

Suitable for general distribution.

Protection of Potatoes from Cold in Transit—Lining and Loading Cars. Pp. 26, figs. 22. Contribution from the Bureau of Markets. February, 1920. (Farmers' Bulletin 1091.)

A revision of Markets Document 17, and of interest to shippers of potatoes.

Prairie Rice Culture in the United States. By Charles E. Chambliss, Agronomist in Charge of Rice Investigations, Office of Cereal Investigations. Pp. 26, figs. 13. Contribution from the Bureau of Plant Industry. February, 1920. (Farmers' Bulletin 1092.)

Suitable for distribution in Louisiana, Texas, and Arkansas.

Book-Lice or Psocids, Annoying Household Pests. By E. A. Back, Entomologist in Charge of Stored Product and Household Insect Investigations. Pp. 4. Contribution from the Bureau of Entomology. February, 1920. (Farmers' Bulletin 1104.)

Suitable for general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

AFThe publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information, as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Waterfowl and Their Food Plants in the Sandhill Region of Nebraska. Part I. Waterfowl in Nebraska. By Harry C. Oberholser, Assistant Biologist. Part II. Wild-Duck Foods of the Sandhill Region of Nebraska. By W. L. Mc-Atee, Assistant Biologist. Pp. 79, pls. 5. Contribution from the Bureau of Biological Survey. (Professional Paper.) Mar. 23, 1920. (Department Bulletin 794.) Price, 15 cents.

This report is first of a series designed to present information on the breeding, wintering, and hunting grounds of waterfowl in the United States.

A Study of the Behavior of Bees in Colonies Affected by European Foulbrood. By Arnold P. Sturtevant, Specialist in the Bacteriology of Bee Diseases. Pp. 28, figs. 6. Contribution from the Bureau of Entomology. (Professional Paper.) March 16, 1920. (Department Bulletin 804.) Price, 5 cents.

A preliminary report on the beginning of an intensive study of European foulbroad of bees.

American Foulbrood. By G. F. White, Specialist in Insect Diseases. Pp. 46, pls. 8, figs. 9. Contribution from the Bureau of Entomology. (Professional Paper.) Mar. 10, 1920. (Department Bulletin 809.) Price, 15 cents.

A technical description and discussion of an infectious disease of the brood of bees caused by Bacillus larvae.

A Pink Yeast Causing Spoilage in Oysters. By Albert C. Hunter, Junior Bacteriologist, Microbiological Laboratory. Pp. 24. Contribution from the Bureau of Chemistry. (Professional Paper.) Mar. 10, 1920. (Department Bulletin 819.) Price, 5 cents.

Of interest to oyster growers and shippers.

Effect of Temperature on the Resistance of Wounding of Certain Small Fruits and Cherries. By Lon A. Hawkins, Plant Physiologist, and Charles E. Sando, Junior Chemist, Office of Horticultural and Pomological Investigations. Pp. 6, fig. 1. Contribution from the Bureau of Plant Industry. (Professional Paper.) Mar. 6, 1920. (Department Bulletin 830.) Price, 5 cents.

Of interest to growers and shippers of berries and cherries.

MISCELLANEOUS.

Proposed Farm Power Studies as Outlined by the Farm Power Conference and the Departmental Committee on Farm Power Projects. Pp. 8, March, 1920. (Circular 149, Office of the Secretary.) Price, 5 cents.

Report of a general conference on farm power problems held in Chicago, Oct. 6 and 7, 1919.

- How Lumber is Graded. By H. S. Betts, Engineer in Forest Products. Pp. 39, figs. 9. Contribution from the Forest Service. March, 1929. (Department Circular 64.) Price, 5 cents.
- A Machine for Trimming Camphor Trees. By G. A. Russell, Expert. Pp. 8, figs. 4. Contribution from the Bureau of Plant Industry, February, 1920. (Department Circular 78.) Price, 5 cents.
- Astragalus Tetrapterus, A New Poisonous Plant of Utah and Nevada. By C. Dwight Marsh and A. B. Clawson, Pathological Division. Pp. 7, figs. 2. Contribution from the Bureau of Animal Industry. January, 1920. (Department Circular 81.) Price, 5 cents.
- A New Sheep-Poisoning Plant of the Southern States. By C. Dwight Marsh, Pathological Division. Pp. 4, fig. 1. Contribution from the Bureau of Animal Industry, 1920. (Department Circular 82.) Price, 5 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 18, No. 11, March 1, 1920. Contents: Effect of the Relative Length of Day and Night and Other Factors of the Environment on Growth and Reproduction in Plants. (G-186.) By W. W. Garner and H. A. Allard. Pp. 553-606, pls. 16, figs. 3. Price, —cents.

MOTE.—Volumes 1 to 4 of the Journal of Agricultural Research were published monthly, volumes 5 to 16 weekly, volume 17 monthly, and volume 18 is being issued semi-monthly. The Journal is distributed free only to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$1.50 per year for domestic circulation and \$2 for foreign circulation.

Experiment Station Record. Vol. 41, No. 9, Abstract Number. Mar. 15, 1920. E. W. Allen, Ph. D., Editor. Pp. 801–900. Price, 15 cents.

NOTE,—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution and its free distribution is restricted to persons connected wth the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

Same, Vol. 40, Index Number. Pp. xxvii, 901–1004. Price, 15 cents.

The Monthly Crop Reporter. Vol. 6, No. 3, March, 1920. Pp. 21-32. (Bureau of Crop Estimates.) Price, 25 cents a year.

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock.

ANNOUNCEMENT.—Because of the small fund available for printing it has been found necessary to drop from the mailing list of the Monthly Crop Reporter all names of persons who are not actively cooperating with the United States Department of Agriculture. Persons whose names are dropped may subscribe for this publication through the Superintendent of Documents, Washington, D. C., at the domestic rate of 25 cents per year, and 40 cents per year to foreign addresses, payable only by postal money order or cash. No checks accepted.

The Market Reporter. Vol. 1, Nos. 10 to 13, inclusive, March 6, 13, 20, 27, 1920. (Bureau of Markets.) For free distribution to applicants who show the need for it.

The Market Reporter is the official marketing publication of the United States Department of Agriculture. It contains general, current, and statistical marketing information for important classes of agricultural products, both staple and perishable, which is of general interest and of permanent value alike to producers, dealers, and consumers.

Index to the Seed Reporter. Vol. 1, Nos. 1-9; Vol. 2, Nos. 1-12; Vol. 3, Nos. 1-4. November, 1917-October 11, 1919. (Bureau of Markets.) For free distribution.

Weekly News Letter, March, 1920.

Contains a weekly summary in popular form of the more important practical discoveries and recommendations of all bureaus of the department. Free list confined to departmental employees, official cooperators, and the press. May be purchased from the Superintendent of Documents, Government Printing Office, for 50 cents a year.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 47, No. 12, December, 1919. [Mar. 10, 1920.] Pp. 841-911, figs. 8, charts, 17. Price, 25 cents a copy, \$2.50 a year. Payable to the Superintendent of Documents.

Special articles: A statistical study of weather factors affecting the yield of winter wheat in Ohio. By T. A. Blair.—Predicting minimum temperatures. By J. Warren Smith.—Winter injury of fruit trees.—The work of the U. S. Weather Bureau in the West Indies. By O. L. Fassig.—New form of British daily weather report.—Note on high free-air wind velocities observed December 16 and 17, 1919. By W. R. Gregg.—The prevailing winds of the north Pacific coast. By A. E. Caswell.—Evaporative capacity. By R. E. Horton.—Cultivation does not increase rainfall. By J. Warren Smith.—The distribution of maximum floods. By A. J. Henry.—Determination of meteorological corrections on the ranges of guns. By W. Noll.—Notes on the meteorological service in the German Army.

Same, Supplement No. 16. Predicting Minimum Temperatures from Hygrometric Data. By J. Warren Smith, Meteorologist, and Others. Pp. 76, figs. 53. Price, 25 cents.

National Weather and Crop and Snow and Ice Bulletin. Nos. 9, 10, 11, 12, 13, March, 1920, reporting weather and crop conditions throughout the United States. Issued weekly. Price, 25 cents a year.

Note.—This bulletin is furnished free of charge to public and educational institutions, libraries, newspapers, cooperative observers, weather correspondents, and to those who will post or display it for the general benefit of the public. To all others the price is 25 cents per year, payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

NOT AVAILABLE FOR FREE DISTRIBUTION.

The department's supply of the publications listed below is exhausted. Requests for them, together with the remittance, should be sent to the Superintendent of Documents, Government Printing Office.

Beautifying the Farmstead. By F. L. Mulford, Landscape Gardener, Office of Horticultural and Pomological Investigations. Pp. 65, figs. 66. Contribution from the Bureau of Plant Industry. March, 1920. (Farmers' Bulletin 1087.) Price, 15 cents.

A suggested arrangement of trees, shrubs, and vines, as well as location of buildings to improve the appearance of farmsteads.

Selection and Care of Clothing. By Laura I. Baldt, Instructor, Department of Textiles and Clothing, Teachers College, Columbia University. Pp. 32, figs. 10. Contribution from the States Relations Service. February, 1920. (Farmers' Bulletin 1089.) Price, 5 cents.

Not available for free distribution.

The Genera of Grasses of the United States, with Special Reference to the Economic Species. By A. S. Hitchcock, Systematic Agrostologist. Pp. 307, pls. 20, figs. 174. Contribution from the Bureau of Plant Industry. (Professional Paper.) Mar. 20, 1920. (Department Bulletin 772.) Price, 40 cents.

This bulletin describes all the genera of grasses that include species that are native, have been introduced, or are cultivated in the United States. Under each genus are given the species that are of economic importance, either as useful or harmful grasses. None for free distribution.

EDWY B. REID, Chief, Division of Publications. Name____ Rural Route or Street No.____ City or Town____

This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., April 30, 1920.

MONTHLY LIST OF PUBLICATIONS.

[APRIL, 1920.]

READ CAREFULLY BEFORE ORDERING.

Send no remittances to the U.S. Department of Agriculture.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as

the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His

office is not a part of the Department of Agriculture.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

MOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

How Insects Affect the Rice Crop. By J. L. Webb, Entomological Assistant, Southern Field Crop Insect Investigations. Pp. 11, figs. 4. Contribution from the Bureau of Entomology. March, 1920. (Farmers' Bulletin 1086.) Of interest to rice growers.

Frost and the Prevention of Damage by It. Pp. 48, figs. 24. Contribution from the Weather Bureau. April, 1920. (Farmers' Bulletin 1096.) Suitable for general distribution, and of interest to fruit growers.

The Argentine Ant as a Household Pest. By E. R. Barber, Scientific Assistant, Southern Field Crop Insect Investigations. Pp. 11, figs. 3. Contribution from the Bureau of Entomology. March, 1920. (Farmers' Bulletin 1101.) For general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information, as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

European Foulbrood. By G. F. White, Specialist in Insect Diseases. Pp. 39, pls. 8, figs. 6. Contribution from the Bureau of Entomology. Feb. 26, 1920. (Department Bulletin 810.) Price, 10 cents.

A technical discussion of this disease of interest to entomologists and investigators in bee diseases.

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The Standard Day's Work in Central Illinois. Performance of Implements and Crews as Indicated by Reports from 600 Farms in a Typical Corn-belt Area. By H. R. Tolley, Scientific Assistant, and L. M. Church, Assistant in Farm Accounting. Pp. 32, figs. 11. Contribution from the Office of Farm Management. April 24, 1920. (Department Bulletin 814.) Price, 10 cents. Contains data that will be of use to farmers for working out problems in farm operations in the corn-belt area.

Broom-Corn Experiments at Woodward, Oklahoma. By Benton E. Rothgeb, Assistant Agronomist in Charge of Grain-Sorghum and Broom-Corn Investigations, and John B. Sieglinger, Assistant Agriculturist, Office of Cereal Investigations. Pp. 53, figs. 7. Contribution from the Bureau of Plant Industry. (Professional Paper.) April 27, 1920. (Department Bulletin 836.) Price, 10 cents.

The results shown in this bulletin are applicable to a greater or less extent to a large part of the Southern Great Plains Area.

The Microscopical Examination of Flour. By George L. Keenan, Microanalyst, and Mary A. Lyons, Microanalyst, Microchemical Laboratory. Pp. 32. Contribution from the Bureau of Chemistry. April 23, 1920. (Department Bulletin 839.) Price, 5 cents.

Of interest to chemists and food inspectors.

A System of Records for Local Farmers' Mutual Fire Insurance Companies. By V. N. Valgren, Investigator in Agricultural Insurance. Pp. 23. Contribution from the Office of Farm Management. April 27, 1920. (Department Bulletin 840.) Price, 5 cents.

The system outlined and illustrated in this bulletin is intended for farmers' mutual fire insurance companies of the prevailing type both as to membership or size and as to method of doing business.

Production of Lumber, Lath, and Shingles in 1918. By Franklin H. Smith and Albert H. Pierson, Statisticians in Forest Products. Pp. 47, figs. 3. Contribution from the Forest Service. April 13, 1920. (Department Bulletin 845.) Price, 10 cents.

Of interest to builders, lumbermen, and contractors.

Rent Contracts in Typical Counties of the Wheat Belt. By E. A. Boeger, Agriculturist. Pp. 15. Contribution from the Office of Farm Management. April 30, 1920. (Department Bulletin 850.) Price, 5 cents.

Of interest to tenants in the wheat-producing States.

MISCELLANEOUS.

Yearbook of the U. S. Department of Agriculture for 1919. Pp. 790, il. Price, \$1.00.

This Yearbook contains the annual report of the Secretary, 68 pages; 29 miscellaneous articles, 428 pages; an appendix, 260 pages; an index, 44 pages. Only 7,000 out of the 500,000 edition are allotted to the Department, and this amount is insufficient to supply its agents, correspondents, and employees. The remainder of the edition is allotted to Senators, Representatives, and Delegates in Congress, and applicants, other than persons connected with the Department, are therefore advised that the publication can not be furnished to them by the Department. The Superintendent of Documents, Government Printing Office, Washington, D. C., has it for sale at \$1.00 per copy.

- The Work of the San Antonio Experiment Farm in 1918. By C. R. Letteer, formerly Farm Superintendent. Pp. 38, figs. 4. Contribution from the Bureau of Plant Industry. March, 1920. (Department Circular 73.) Price, 5 cents.
- The Work in 1918 of the Newlands (formerly the Truckee-Carson) Reclamation Project Experiment Farm. By F. B. Headley, Farm Superintendent. Pp. 18, fig. 1. Contribution from the Bureau of Plant Industry. March, 1920. (Department Circular 80.) Price, 5 cents.
- Annual Report of the Governor of Alaska on the Alaska Game Law, 1919. Pp. 18. Contribution from the Bureau of Biological Survey. 1920. (Department Circular 88.) Price, 5 cents.
- Control of Watermelon Anthracnose by Spraying. By F. C. Meier, Pathologist, Office of Cotton, Truck, and Forage Crop Disease Investigations. Pp. 11, figs. 8. Contribution from the Bureau of Plant Industry. March, 1920. (Department Circular 90.) Price, 5 cents.

United States Grades for Northern-Grown Onions Recommended by the United States Department of Agriculture. By Hartley E. Truax, Investigator in Marketing. Pp. 4. Contribution from the Bureau of Markets. March, 1920. (Department Circular 95.) Price, 5 cents.

SERIALS.

Experiment Station Record. Vol. 42, No. 1, January, 1920. E. W. Allen, Ph. D., Editor. Pp. 1–100. Price, 15 cents.

Same, Vol. 42, No. 2. February, 1920. Pp. 101-200. Price, 15 cents.

Same, Vol. 42, No. 3. Abstract Number. April 16, 1920. Pp. 201-300. Price, 15 cents.

Same, Vol. 42, No. 4. March, 1920. Pp. 301-400. Price, 15 cents.

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The Monthly Crop Reporter. Vol. 6, No. 4, April, 1920. Pp. 33-40. (Bureau of Crop Estimates.) Price, 25 cents a year.

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock.

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The Market Reporter. Vol. 1, Nos. 14 to 17, inclusive, April 3, 10, 17, 24, 1920. (Bureau of Markets.) For free distribution to applicants who show the need for it.

The Market Reporter is the official marketing publication of the United States Department of Agriculture. It contains general, current, and statistical marketing information for important classes of agricultural products, both staple and perishable, which is of general interest and of permanent value alike to producers, dealers, and consumers.

Weekly News Letter, April, 1920.

Contains a weekly summary in popular form of the more important practical discoveries and recommendations of all bureaus of the department. Free list confined to departmental employees, official cooperators, and the press. May be purchased from the Superintendent of Documents, Government Printing Office, for 50 cents a year.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Hamilton County, Iowa. By Knute Espe, of the Iowa Agricultural Experiment Station, and Lawrence E. Lindley, of the U. S. Department of Agriculture. Pp. 30, fig. 1, map. (From F. O. Soils, 1917.) Price, 15 cents.

Soil Survey of Sargent County, North Dakota. By F. Z. Hutton and B. H. Hendrickson, of the U. S. Department of Agriculture, and Melvin Thomas and Spencer Buster, of the North Dakota Agricultural Experiment Station. Pp. 41, fig. 1, map. (From F. O. Soils, 1917.) Price, 15 cents.

Soil Survey of Waupaca County, Wisconsin. By W. J. Geib and Clarence Lounsbury, of the U. S. Department of Agriculture, and Martin O. Tosterud, of the Wisconsin Geological and Natural History Survey. Pp. 51, fig. 1, map. (From F. O. Soils, 1917.) Price, 15 cents.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instructions, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials, whose duties render it necessary for them to have such information, to journals especially concerned, and to

manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale only, at prices noted.

Bureau of Animal Industry. No. 153. January, 1920. Pp. 1-20. March 20, 1920. Price, 5 cents.

Bureau of Animal Industry. No. 154. February, 1920. Pp. 21-28. April 9, 1920. Price, 5 cents.

Bureau of Chemistry. Supplement 63. [N. J. 6601–6650.] Pp. 117–176. March 23, 1920. Price, 10 cents.

Same, Supplement 64. [N. J. 6651-6700.] Pp. 177-232. March 29, 1920. Price, 10 cents.

Same, Supplement 65. [N. J. 6701-6750.] Pp. 233-268. April 9, 1920. Price, 10 cents.

Same, Supplement 66. [N. J. 6751-6800.] Pp. 269-304. April 20, 1920. Price, 10 cents.

Same, Supplement 67. [N. J. 6801-6850.] Pp. 305-341. April 23, 1920. Price, 10 cents.

Federal Horticultural Board. Index to Service and Regulatory Announcements for 1919. Pp. 129-135. March 29, 1920. Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

@Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 48, No. 1. January, 1920. [April 2, 1920.] Pp. 1-68, figs. 32, charts 16. Price, 25 cents a copy, \$2.50 a year. Payable to the Superintendent of Documents.

Special Articles: Average free-air conditions as observed by means of kites at Drexel Aerological station, Nebraska, during the period November, 1915, to December, 1918, inclusive. By W. R. Gregg.—Sunshine in the United States. By J. B. Kincer.—The sun as a source of power.—On observations of solar and sky radiations and their importance to climatology and biology and also to geophysics and astronomy. By C. Dorno.—Smoke formations in air drainage. By C. Hallenbeck; with an introduction by J. Warren Smith.—A cloud cross-section of a winter cyclone. By C. F. Brooks.—Snow crystals from the crystallographic standpoint. By E. T. Wherry.—The progressive desiccation of the colony of Senegal.—How rainfall data may be used for determining road conditions.—Extraordinary high barometer readings in Bering Sea, January 17, 1920. By A. H. Mellick.

National Weather and Crop and Snow and Ice Bulletin. Nos. 14, 15, 16, 17, April, 1920, reporting weather and crop conditions throughout the United States. Issued weekly. Price, 25 cents a year.

Note.—This bulletin is furnished free of charge to public and educational institutions, libraries, newspapers, cooperative observers, weather correspondents, and to those who will post or display it for the general benefit of the public. To all others the price is 25 cents per year, payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

EDWY B. REID, Chief, Division of Publications.

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This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., May 31, 1920.

MONTHLY LIST OF PUBLICATIONS.

[MAY, 1920.]

READ CAREFULLY BEFORE ORDERING.

Send no remittances to the U.S. Department of Agriculture.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

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FARMERS' BULLETINS-FOR FREE DISTRIBUTION.

MENOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

Selecting a Farm. By E. H. Thomson, Formerly Assistant Chief, Office of Farm Management. Pp. 27, figs. 4. Contribution from the Office of Farm Management. March, 1920. (Farmers' Bulletin 1088.)

Suitable for general distribution.

Name_

Rabbit Raising. By Ned Dearborn, Assistant Biologist. Pp. 35, figs. 22. Contribution from the Bureau of Biological Survey. March, 1920. (Farmers' Bulletin 1098.)

This bulletin illustrates the saving and earning possibilities of rabbit raising.

The Alfalfa Caterpillar. By V. L. Wildermuth, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 16, figs. 14. Contribution from the Bureau of Entomology. April, 1920. (Farmers' Bulletin 1094.)

Suitable for general distribution.

The Stable Fly. How to Prevent Its Annoyance and Its Losses to Live Stock. By F. C. Bishopp, Entomologist, Investigations of Insects Affecting Health of Animals. Pp. 23, figs. 11. Contribution from the Bureau of Entomology. April, 1920. (Farmers' Bulletin 1097.)

A revision of Farmers' Bulletin 540, and is suitable for general distribution.

Cooperative Marketing of Woodland Products. By A. F. Hawes, Extension Specialist in Forestry. Pp. 15, figs. 6. Contribution from the Forest Service. March, 1920. (Farmers' Bulletin 1100.)

This bulletin points out that what has been done in the cooperative marketing of other farm products can be done with woodland products.

Carpet Grass. By C. V. Piper, Agrostologist in Charge, and Lyman Carrier, Agronomist, Office of Forage-Crop Investigations. Pp. 12, figs. 5. Contribution from the Bureau of Plant Industry. April, 1920. (Farmers' Bulletin 1130.)

Describes a valuable grass for permanent pasture on the sandy soils of the Coastal Plain area of the South.

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DEPARTMENTAL BULLETINS-TECHNICAL.

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The Clover and Alfalfa Seed Chalis-Fly. By Theodore D. Urbahns, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 20, pls. 7, figs. 2. Contribution from the Bureau of Entomology. (Professional Paper.) May 31, 1920. (Department Bulletin 812.) Price, 10 cents.

A technical discussion of the history and habits of this insect of interest to ento-

mologists.

Observations on the Life History of Ascaris Lumbricoides. By B. H. Ransom, Chief, and W. D. Foster, Junior Zoologist, Zoological Division. Pp. 47, figs. 6. Contribution from the Bureau of Animal Industry. (Professional Paper.) May 12, 1920. (Department Bulletin 817.) Price, 10 cents.

Jack Pine. By William Dent Sterrett, Forest Examiner. Pp. 47, pls. 16, figs. 3. Contribution from the Forest Service. (Professional Paper.) May 22, 1920. Department Bulletin 820.) Price, 25 cents.

Describes the range, types, and characteristics of this species of pine and shows its adaptability to successful management, especially when grown on dry, barren, and sandy soils.

Bacterial Wilt of Cucurbits. By Frederick V. Rand, Assistant Pathologist, and Ella M. A. Enlows, formerly Assistant Pathologist, Laboratory of Plant Pathology. Pp. 43, pls. 4, figs. 10. Contribution from the Bureau of Plant Industry. (Professional Paper.) May 10, 1920. (Department Bulletin 828.) Price, 15 cents.

A study of the relation of soil and insects to the distribution and control of this disease.

Black Grain-Stem Sawfly of Europe in the United States. By A. B. Gahan, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 18, pls. 2. Contribution from the Bureau of Entomology. (Professional Paper.) May 19, 1920. (Department Bulletin 834.) Price, 5 cents.

Describes the life history and habits of this insect and suggests methods of control.

Chrysanthemum Midge. By C. A. Weigel and H. L. Sanford, Collaborators, Tropical and Subtropical Fruit Insect Investigations. Pp. 25, pls. 2, figs. 2. Contribution from the Bureau of Entomology. May 31, 1920. (Department Bulletin 833.) Price, 10 cents.

Discusses the life history and habits of the insect and suggests methods of control.

The Western Grass-Stem Sawfly. By C. N. Ainslie, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 27, figs. 10. Contribution from the Bureau of Entomology. (Professional Paper.) May 7, 1920. (Department Bulletin 841.) Price, 10 cents.

Describes the life history and habits and suggests methods of control of this insect, which is becoming a menace to grain growers of the Northwestern States.

Saponified Cresol Solutions. By Jacob M. Schaffer, Junior Chemist, Biochemic Division. Pp. 5. Contribution from the Bureau of Animal Industry. (Professional Paper. May 6, 1920. (Department Bulletin 855.) Price, 5 cents.

This paper describes a series of experiments undertaken with the object of preparing a saponified cresol solution which would be cheaper and at the same time no less effective as a disinfectant than those at present in use.

MISCELLANEOUS.

- Annual Reports of the Department of Agriculture for the year ended June 30, 1919. Report of the Secretary with Reports of Chiefs of Bureaus and Divisions. Pp. 560. 1920. Price, 75 cents.
- The Work of the Yuma Reclamation Project Experiment Farm in 1918. By R. E. Blair, Formerly Farm Superintendent. Pp. 77, figs. 32. Contribution from the Bureau of Plant Industry. April, 1920. (Department Circular 75.) Price, 10 cents.
- The Work of the Huntley Reclamation Project Experiment Farm in 1918. By Dan Hansen, Farm Superintendent. Pp. 32, figs. 5. Contribution from the Bureau of Plant Industry. April, 1920. (Department Circular 86.) Price, 5 cents.
- Kudzu. By C. V. Piper, Agrostologist in Charge of the Office of Forage-Crop Investigations. Pp. 7, figs. 2. Contribution from the Bureau of Plant Industry. April, 1920. (Department Circular 89.) Price, 5 cents.

Shows the value of this plant as a forage crop and is suitable for general distri-

bution.

The Jack Bean. By C. V. Piper, Agrostologist in Charge of Forage-Crop Investigations. Pp. 12, fig. 1. Contribution from the Bureau of Plant Industry. (Department Circular 92.) Price, 5 cents. April, 1920.

TNT as a Blasting Explosive. By Charles E. Munroe, Chief Explosive Chemist, and Spencer P. Howell, Explosive Engineer, Bureau of Mines. Pp. 24, figs. 9. Contribution from the Bureau of Public Roads. May, 1920. partment Circular 94.) Price, 10 cents.

Describes the physical and chemical properties of the different grades of the explosive; gives precautions to be observed in handling, packing, preparation of cartridges, and charging; presents the results of field tests in blasting stumps, rocks, and other work; and compares the results with those obtained from dynamite.

United States Grades for Bermuda Onions Recommended by the United States Department of Agriculture. By Hartley E. Truax, Investigator in Marketing. Pp. 4. Contribution from the Bureau of Markets. May, 1920. (Department Circular 97.) Price, 5 cents.

The Installation of Dust-Collecting Fans on Thrashing Machines for the Prevention of Explosions and Fires and for Grain Cleaning. By H. E. Roethe, jr., Assistant in Grain Dust Explosion Prevention, Bureau of Chemistry, and E. N. Bates, Investigator in Grain Handling, Bureau of Markets. May, 1920. (Department Circular 98.) Price, 5 cents.

United States Grades for Sweet Potatoes Recommended by the United States Department of Agriculture. By Hartley E. Truax, Investigator in Marketing. Pp. 4. Contribution from the Bureau of Markets. May, 1920. (Department Circular 99.) Price, 5 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.)

Vol. 19, No. 2. April 15, 1920. Contents: Effect of Calcium Sulphate on the Solubility of Soils. (tv Mich.-10.) By M. M. McCool and C. E. Millar.—Further Studies on the Influence of Humidity Upon the Strength and Elasticity of Wool Fiber. (ua. Wyo.-3.) By J. I. Hardy.—Composition and Density of the Native Vegetation in the Vicinity of the Northern Great Plains Field Station. (tx G-188.) By J. T. Sarvis.—Effect of Reaction of Solution on Germination of Seed and on Growth of Seedlings. (ty W. Va.-1.) By Robert M. Salter and T. C. McIlvaine. Pp. 74-96, pls. 4, figs. 16. Price, 20 cents.

Same, Vol. 15, No. 13. Contents and Index of Volume 15. Pp. xvii, 667-681. [May, 1920.] Price, 10 cents.

NOTE.—Volumes 1 to 4 of the Journal of Agricultural Research were published monthly, volumes 5 to 16 weekly, volume 17 monthly, and volume 18 is being issued semi-monthly. The Journal is distributed free only to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such intitutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$1.50 per year for domestic circulation and \$2 for foreign circulation.

Experiment Station Record. Vol. 42, No. 5. April, 1920. E. W. Allen, Ph. D., Editor. Pp. 401-500. Price, 15 cents.

Same, Vol. 42, No. 6. Abstract Number. Pp. 501-600. Price, 15 cents.

Note.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Reporter. Vol. 6, No. 5. May, 1920. Pp. 41-48. (Bureau of Crop Estimates.) Price, 25 cents a year.

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock.

ANNOUNCEMENT .- Because of the small fund available for printing it has been found necessary to drop from the mailing list of the Monthly Crop Reporter all names of persons who are not actively cooperating with the United States Department of Agriculture. Persons whose names are dropped may subscribe for this publication through the Superintendent of Documents, Washington, D. C., at the domestic rate of 25 cents per year, and 40 cents per year to foreign addresses, payable only by postal money order or cash. No checks accepted.

Weekly News Letter, May, 1920.

Contains a weekly summary in popular form of the more important practical discoveries and recommendations of all bureaus of the department. Free list confined to departmental employees, official cooperators, and the press. May be purchased from the Superintendent of Documents, Government Printing Office, for 50 cents a year.

The Market Reporter. Vol. 1, Nos. 18 to 22, inclusive, May 1, 8, 15, 22, 29, 1920. (Bureau of Markets.) For free distribution to applicants who show the need for it.

The Market Reporter is the official marketing publication of the United States Department of Agriculture. It contains general, current, and statistical marketing information for important classes of agricultural products, both staple and perishable, which is of general interest and of permanent value alike to producers, dealers, and consumers.

SOIL SURVEYS.

ATAll requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Morrill County, Nebraska. By F. A. Hayes and H. W. Hawker, of the U. S. Department of Agriculture, and M. D. Davis and V. H. Seabury, of the University of Nebraska. Pp. 69, fig. 1, map. (From F. O. Soils, 1917.) Price, 25 cents.

Soil Survey of Traill County, North Dakota. By F. Z. Hutton, of the U. S. Department of Agriculture, and Earl Nichols, of the North Dakota Agricultural Experiment Station. Pp. 47, pl. 1, map. (From F. O. Soils, 1918.) Price, 15 cents.

SERVICE AND REGULATORY ANNOUNCEMENTS-FOR SALE ONLY.

As These contain only information, instructions, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. Free distribution is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale only, at prices noted.

Bureau of Animal Industry. No. 155. Pp. 29-44. May 10, 1920. Price, 5 cents.

Bureau of Biological Survey. No. 32. P. 1. May 10, 1920. Price, 5 cents.

Bureau of Chemistry. Supplement No. 68. [N. J. 6851–6900.] Pp. 343–384. May, 1920. Price, 10 cents.

Insecticide and Fungicide Board. No. 28. [N. J. 401–500.] Pp. 641–648. April 30, 1920. Price, 5 cents.

Same No. 29. [N. J. 501–550.] Pp. 649–672. May 13, 1920. Price, 5 cents. Bureau of Markets. No. 62. Pp. 16. May 29, 1920. Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Republications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 48, No. 2. February, 1920. [May 3, 1920.] Pp. 69–126, figs. 19, charts 32. Price, 25 cents a copy, \$2.50 a year. Payable to the Superintendent of Documents.

Special Articles: The nature of sleet and how it is formed. By C. F. Brooks.—A weather condition which produces glaze in northern New York. By D. F. Manning.—Boundary between a south wind and an underrunning northeast wind. By C. F. Brooks.—The precipitation of sleet and the formation of glaze in the eastern United States, January 20 to 25, 1920, with remarks on forecasting. By C. L. Meisinger.—Demoralization of traffic in New York City by snow and sleet.—Tremendous snowstorm in Palestine, February 9–11, 1920. By O. A. Glazebrook.—Note on deep northeast-component winds observed January 27–31, 1920. By S. Gottlich.—Blizzards and chinooks of the North Dakota plains. By F. J. Bavendick.—Weather forecasting. By H. H. Clayton.—The value of high-level meteorological data in forecasting changes of temperature, a contribution to the meteorology of Mount Rose, Nev. By S. P. Fergusson.—Altitude determinations based on barometric readings. By H. G. Cornthwaite.—On the comparison of meteorological data with results of chance. By L. Besson.—Effect of a Florida freeze on insects.

National Weather and Crop and Snow and Ice Bulletin. Nos. 18, 19, 20, 21, May, 1920, reporting weather and crop conditions throughout the United States. Issued weekly. Price, 25 cents a year.

Note.—This bulletin is furnished free of charge to public and educational institutions, libraries, newspapers, cooperative observers, weather correspondents, and to those who will post or display it for the general benefit of the public. To all others the price is 25 cents per year, payable to the Superintendent of Documents, Government Printing Office, Washngton, D. C.

EDWY B. REID, Chief, Division of Publications.

WASHINGTON; GOVERNMENT PRINTING OFFICE: 1920

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This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

Washington, D. C., June 30, 1920.

MONTHLY LIST OF PUBLICATIONS.

[JUNE, 1920.]

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After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

##NOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

Dockage Under the Federal Wheat Grades. By Ralph H. Brown, Grain Supervisor. Pp. 26, figs. 10. Contribution from the Bureau of Markets. 1920. (Farmers' Bulletin 1118.)

The official grain standards for wheat of all classes were revised, effective July 15, 1918, and this publication sets forth the recommendations of the department on the determining of dockage under the revised grades. Supersedes Farmers' Bulletin 919.

Control of Apple Powdery Mildew. By D. F. Fisher, Pathlogist, Fruit Disease Investigations. Pp. 14, figs. 8. Contribution from the Bureau of Plant Industry. May, 1920. (Farmers' Bulletin 1120.)

This Bulletin is of special interest to apple growers located west of the Rocky Mountains.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information, as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

The Whorled Milkweed (Asclepias galioides) as a Poisonous Plant. By C. Dwight Marsh and A. B. Clawson, Physiologists, and J. F. Couch, Pharmacological Chemist, Bureau of Animal Industry, and W. W. Eggleston, Assistant Botanist, Bureau of Plant Industry. Pp. 40, pls. 7, figs. 4. Contribution from the Bureau of Animal Industry. (Professional Paper.) June 8, 1920. (Department Bulletin 800.) Price, 15 cents.

Contains a description of the plant and suggests methods of eradication.

Citrus Fruit Improvement: A Study of Bud Variation in the Lisbon Lemon. By A. D. Shamel, Physiologist, L. B. Scott, Pomologist, C. S. Pomeroy, Assistant Pomologist, and C. L. Dyer, Scientific Assistant, Fruit Improvement Investigations, Office of Horticultural and Pomological Investigations. Pp. 70, pls. 8, figs. 14. Contribution from the Bureau of Plant Industry. (Professional June 1, 1920. (Department Bulletin 815.) Price, 25 cents. Paper.)

191°--20

Citrus-Fruit Improvement: A Study of Bud Variation in the Eureka Lemon. By A. D. Shamel, Physiologist, L. B. Scott, Pomologist, C. S. Pomeroy, Assistant Pomologist, and C. L. Dyer, Scientific Assistant Fruit Improvement Investigations, Office of Horticultural and Pomological Investigations. Pp. 88, pls. 7, figs. 22. Contribution from the Bureau of Plant Industry. (Professional Paper.) June 25, 1920. (Department Bulletin 813.) Price, 25 cents. Of interest to citrus-fruit growers generally.

Frost Protection in Lemon Orchards. By A. D. Shamel, Physiologist, L. B. Scott, Pomologist, and C. S. Pomeroy, Assistant Pomologist, Office of Horticultural and Pomological Investigations. Pp. 30, pls. 3, figs. 15. Contribution from the Bureau of Plant Industry. June 4, 1920. (Department Bul-

letin 821.) Price, 10 cents.

Of interest to citrus-fruit growers.

Insect Powder. By C. C. McDonnell, Chief, R. C. Roark, Assistant Chemist, Insecticide and Fungicide Laboratory, and G. L. Keenan, Microanalyst, Microchemical Laboratory. Pp. 100, pls. 4. Contribution from the Bureau of Chemistry and the Insecticide and Fungicide Board. (Professional Paper.) June 3, 1920. (Department Bulletin 824.) Price, 20 cents.

A technical description of the origin, manufacture, and adulteration of insect powder. Of interest to manufacturers of and dealers in this substance.

The Flow of Water in Dredged Drainage Ditches. The Results of Experiments to Determine the Roughness of Coefficient, n, in Kutter's Formula. By C. E. Ramser, Senior Drainage Engineer. Pp. 60, pls. 20, figs. 12. Contribution from the Bureau of Public Roads. (Professional Paper.) June 7, 1920. (Department Bulletin 832.) Price, 30 cents.

Of interest to drainage engineers.

Control of the Grape-Berry Moth in Northern Ohio. By H. G. Ingerson, Scientific Assistant, and G. A. Runner, Entomological Assistant, Deciduous Fruit Insect Investigations. Pp. 26, pls. 4, fig. 1. Contribution from the Bureau of Entomology. June 3, 1920. (Department Bulletin 837.) Price,

Suggests improvements in methods of control of this insect.

Cypress Bark Scale. By F. B. Herbert, Scientific Assistant, Forest Insect Investigations. Pp. 22, pls. 6, figs. 4. Contribution from the Bureau of Entomology. (Professional Paper.) June 5, 1920. (Department Bulletin 838.) Price, 10 cents.

A study of the history, biology, importance, and control of this insect.

The Bean Ladybird. By F. H. Chittenden, Entomologist in Charge, and H. O. Marsh, Entomological Assistant, Truck-Crop Insect Investigations. With a report on "The Bean Ladybird in Colorado, in 1919," by A. C. Mallory, Scientific Assistant. Pp. 24, pls. 6, figs. 5. Contribution from the Bureau of Entomology. (Professional Paper.) June 7, 1920. (Department Bulletin 843.) Price, 10 cents.

A technical study of the life, history, and habits and natural enemies of this insect, with suggested methods of control.

Examination of Frozen Egg Products and Interpretation of Results. By H. W. Redfield. Pp. 96, figs. 3. Contribution from the Bureau of Chemistry. (Professional Paper.) June 5, 1920. (Department Bulletin 846.) Price, 10 cents.

Of interest to packers and handlers of these products.

MISCELLANEOUS.

Sweet-Clover-Seed Screenings Not Injurious to Sheep. By C. Dwight Marsh, Physiologist in Charge of Poisonous Plant Investigations, and Glenwood C. Roe, Assistant in Poisonous Plant Investigations, Pathological Division. Pp. 7. Contribution from the Bureau of Animal Industry. May, 1920. Department Circular 87.) Price, 5 cents.

United States Grades for Potatoes Recommended by the United States Department of Agriculture. By Hartley E. Truax, Investigator in Marketing. Pp. 4. Contribution from the Bureau of Markets. May, 1920. (Department Circular 96.) Price, 5 cents.

The Whorled Milkweed, a Plant Poisonous to Livestock. By C. Dwight Marsh, Pathological Division. Pp. 2, fig. 1. Contribution from the Bureau of Animal Industry. May, 1920. (Department Circular 101.) Price, 5 cents. Of interest to stockmen in southern Colorado and Utah and Northern Arizona and New Mexico.

- Decision of the Supreme Court of the United States Sustaining the Constitutionality of the Migratory Bird Treaty and Act of Congress to Carry It into Effect. The State of Missouri vs. Ray P. Holland, United States Game Warden. Pp. 4. Contribution from the Office of the Solicitor. June 10, 1920. (Department Circular 102.)
- Timber Depletion and the Answer. A Summary of the Report on Timber Depletion and Related Subjects prepared in response to Senate Resolution 311. Pp. 16. Contribution from the Forest Service. June, 1920. (Department Circular 112.) Price, 5 cents.

SERIALS.

- Journal of Agricultural Research. (For sale only.) Vol. 19, No. 1. April 1, 1920. Contents: A Teosinte-Maize Hybrid. (tu G-187.) By G. N. Collins and J. H. Kempton.—Banana Root-Borer. (tw K-84.) By G. F. Moznette. Pp. 1-46, pls. 11, figs. 33. Price, 30 cents.
- Same. Vol. 19, No. 3. May 1, 1920. Contents: Philippine Downy Mildew of Maize. (tz G-189.) By William H. Weston, jr.—Effect of Drugs on Milk and Fat Production. (ub Del.-3.) By Frank A. Hays and Merton G. Thomas.—Artificial and Insect Transmission of Sugar-Cane Mosaic. (uf G-190.) By E. W. Brandes. Pp. 97-138, pls. 12, figs. 8. Price, 45 cents.
- Same. Vol. 19, No. 4. May 15, 1920. Contents: Halo-Blight of Oats. (uc G-191.) By Charlotte Elliott.—Influence of Fermentation on the Starch Content of Experimental Silage. (ud Iowa-7.) By Arthur W. Dox and Lester Yoder.—Effect of Premature Freezing on Composition of Wheat. (ue Mont.-6.) By M. J. Blish. Pp. 139–188, pls. 11. Price, 35 cents.
- Same. Vol. 19, No. 5. June 1, 1920. Contents: Behavior of the Citrus-Canker Organism in Soil. (ug G-192.) By H. Atherton Lee.—Decline of Pseudomonas Citri in the Soil. (uh G-193.) By H. R. Fulton.—Variation of Individual Pigs in Economy of Gain. (ui Minn.-40.) By R. C. Ashby and A. W. Malcomson.—Production of Conidia in Gibberella saubinetii. (uj G-194.) By James G. Dickson and Helen Johann. Pp. 189-237, pls. 2, fig. 1. Price, 25 cents.
- Same. Vol. 19, No. 6. June 15, 1920. Contents: Effect of Manure-Sulphur Composts upon the Availability of the Potassium of Greensand. (uk Md.-2.) By A. G. McCall and A. M. Smith. Rust in Seed Wheat and Its Relation to Seedling Infection. (ul G-195.) By Charles W. Hungerford. Pp. 239-278, pls. 11, figs. 3. Price, 25 cents.
- Same. Vol. 19, No. 7. July 1, 1920. Contents: Practical Universality of Field Heterogeneity Plot yields. (um G-196.) By J. Arthur Harris.—Transmission of Mosaic Disease of Irish Potatoes. (un G-197.) By E. S. Schultz and Donald Folsom. Pp. 279–337, pls. 8. Price, 25 cents.
- Note.—Volumes 1 to 4 of the Journal of Agricultural Research were published monthly, volumes 5 to 16 weekly, volume 17 monthly. Beginning with volume 18, the publication will be issued semimonthly. The Journal is distributed free only to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$1.50 per year for domestic circulation and \$2 for foreign circulation.
- The Monthly Crop Reporter. Vol. 6, No. 6, June, 1920. Pp. 49-60. (Bureau of Crop Estimates.) Price, 25 cents a year.

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock.

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- The Market Reporter. Vol. 1, Nos. 23 to 26, inclusive, June 5, 12, 19, 26, 1920. (Bureau of Markets.) For free distribution to applicants who show the need for it.

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SOIL SURVEYS.

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Soil Survey of Yamhill County, Oregon. By A. E. Kocher and E. J. Carpenter, of the U. S. Department of Agriculture, and C. V. Ruzek and J. E. Cooter, of the Oregon Agricultural College Experiment Station. Pp. 66, pls. 5, fig. 1, map. (From F. O. Soils, 1917.) Price, 15 cents.

Soil Survey of Lubbock County, Texas. By J. O. Veatch and H. G. Lewis. Pp. 32, pls. 2, fig. 1, map. (From F. O. Soils, 1917.) Price, 15 cents.

Soil Survey of Accomac and Northampton Counties, Virginia. By E. H. Stevens. Pp. 62, pls. 4, fig. 1, map. (From F. O. Soils, 1917.) Price, — cents.

SERVICE AND REGULATORY ANNOUNCEMENTS-FOR SALE ONLY.

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Bureau of Animal Industry. No. 156. April, 1920. Pp. 45–55. June 2, 1920. Price, 5 cents.

Same. No. 157. May, 1920. Pp. 57-64. June 21, 1920. Price, 5 cents.

Bureau of Chemistry. Supplement No. 69. [N. J. 6901–6950.] Pp. 385–425. June 16, 1920. Price, 10 cents.

Federal Horticultural Board. No. 67. January, February, March, April, 1920. Pp. 50. June 11, 1920. Price, 5 cents.

Pp. 50. June 11, 1920. Price, 5 cents.

Bureau of Markets. No. 61. Information Concerning the United States Warehouse Act. Pp. 36. June 2, 1920. Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 48, No. 3. March, 1920. June 5, 1920. Pp. 127–190, figs. 30, charts 14. Price, 25 cents a copy, \$2.50 a year. Payable to the Superintendent of Documents.

Special articles: Relation of changes in storm tides on the coast of the Gulf of Mexico to the center and movement of hurricanes. By I. M. Cline.—The forecasting of swells on the coast of Morocco. By L. Gain.—Discrepancies between Angström and Smithsonian instruments. By C. G. Abbot.—Forecasting the weather on short-period solar variations. By C. F. Marvin.—The agricultural significance of sunshine as illustrated in California. By A. H. Palmer.—Project for local forecast studies. By R. H. Weightman.—Mackerel sky as a prognostic of precipitation. By H. H. Martin.—The drought in California. By A. H. Palmer.—"Snowball" hail at Topeka, Kans., March 3, 1920. By S. D. Flora.—Hailstorm of March 3, 1920, at Broken Arrow, Okla. By J. W. Arnold.—Tornado in southwestern Missouri, March 11, 1920.

Same. Title-page, Contents, and Index to Vol. 47. 1919. 1920. Pp. 20.

National Weather and Crop and Snow and Ice Bulletin. Nos. 22, 23, 24, 25, 26, June, 1920, reporting weather and crop conditions throughout the United States. Issued weekly. Price, 25 cents a year.

Note.—This bulletin is furnished free of charge to public and educational institutions, libraries, newspapers, cooperative observers, weather correspondents, and to those who will post or display it for the general benefit of the public. To all others the price is 25 cents per year, payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

Edwy B. Reid, Chief, Division of Publications.

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United States Department of Agriculture,

WASHINGTON, D. C., July 31, 1920.

MONTHLY LIST OF PUBLICATIONS.

[JULY, 1920.]

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FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

Farm Bookkeeping. By Edward H. Thomson, formerly Assistant Chief, Office of Farm Management, revised by James S. Ball, Assistant in Farm Accounting. Pp. 41. Contribution from the Office of Farm Management. Revised, June, 1920. (Farmers' Bulletin 511.)

Suitable for general distribution.

Pop Corn for the Market. By C. P. Hartley, Physiologist in Charge of Corn Investigations, and J. G. Willier, Scientific Assistant in Corn Investigations, Office of Cereal Investigations. Pp. 12, figs. 10. Contribution from the Bureau of Plant Industry, Revised April, 1920. (Farmers' Bulletin 554.)

Tobacco Culture. By W. W. Garner, Physiologist in Charge of Tobacco and Plant-Nutrition Investigations. Pp. 24, figs. 5. Contribution from the Bureau of Plant Industry. Revised April, 1920. (Farmers' Bulletin 571.)

Grasshoppers and Their Control on Sugar Beets and Truck Crops. By F. B. Milliken, Scientific Assistant. Pp. 20, figs. 13. Contribution from the Bureau of Entomology. Revised March, 1920. (Farmers' Pulletin 691.) Suitable for general distribution.

Food for Young Children. By Caroline L. Hunt, Specialist in Food Preparation and Use, Office of Home Economics. Pp. 26, figs. 4. Contribution from the States Relations Service. Revised June, 1920. (Farmers' Bulletin 717.)

Cutworms and Their Control in Corn and Other Cereal Crops. By W. R. Walton, Entomologist in Charge, Cereal and Forage Insect Investigations. Pp. 7, figs. 3. Contribution from the Bureau of Entomology. Revised May, (Farmers' Bulletin 739.)

Suitable for general distribution.

Standard Varieties of Chickens. II. The Mediterranean and Continental Classes. By Rob R. Slocum, Annual Husbandry Division. Pp. 27, figs. 22. Contribution from the Bureau of Animal Industry. Revised May, 1920. (Farmers' Bulletin 898.)

Hog Lice and Hog Mange. Methods of Control and Eradication. By Marion Imes, Zoological Division. Pp. 28, figs. 12. Contribution from the Bureau of Animal Industry. 1920. (Farmers' Bulletin 1085.)

Suitable for general distribution,

Influence of the Tractor on Use of Horses. By L. A. Reynoldson, Scientific Assistant. Pp. 26, figs. 7. Contribution from the Office of Farm Management. 1920. (Farmers' Bulletin 1093.)

Summarizes the results of investigations on 191 farms in the corn belt as to the

advantage of the use of tractors.

Forage for the Cetton Belt. By S. M. Tracy, Agronomist, Office of Forage-Crop Investigations. Pp. 63, figs. 9. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1125.)

A revision of Farmers' Bulletin 509 and intended for distribution in the Southern

States.

Sudan Grass. By H. N. Vinal, Agronomist, Office of Forage-Crop Investigations. Pp. 30, figs. 11. Contribution from the Bureau of Plant Industry. (Farmers' Bulletin 1126.)

Contains detailed information on the culture, utilization, and feeding value of this

Control of Aphids Injurious to Orchard Fruits, Currant, Gooseberry, and Grape. By A. L. Quaintance, Entomologist in Charge, and A. C. Baker, Entomologist, Deciduous Fruit Insect Investigations. Pp. 48, figs. 34. Contribution from the Bureau of Entomology. June, 1920. (Farmers' Bulletin 1128.)

Suitable for general distribution.

Tile-Trenching Machinery. By D. L. Yarnell, Senior Drainage Engineer, Division of Drainage Investigations. Pp. 27, figs. 22. Contribution from the Bureau of Public Roads. 1920. (Farmers' Bulletin 1131.)

Describes the various types and discusses the advantages and disadvantages of the use of machines in ditching operations.

For general distribution.

- Castrating and Docking Lambs. By G. H. Bedell, Animal Husbandry Division, Bureau of Animal Industry, and E. W. Baker, Investigator in Marketing Live Stock and Meats, Bureau of Markets. Pp. 14, figs. 9. Contribution from the Bureau of Animal Industry and the Bureau of Markets. 1920. (Farmers' Bulletin 1134.) Suitable for general distribution.
- Game Laws for 1920. A Summary of the Provisions of Federal, State, and Provincial Statutes. By Geo. A. Lawyer, Chief United States Game Warden, and Frank L. Earnshaw, Assistant, Interstate Commerce in Game. Pp. 84. Contribution from the Bureau of Biological Survey. August, 1920. (Farmers' Bulletin 1138.)

A Method of Analyzing the Farm Business. By H. M. Dixon, Assistant Agriculturist, and H. W. Hawthorne, Scientific Assistant. Pp. 40, fig. 1, form blanks. Contribution from the Office of Farm Management. 1920. (Farm-

ers' Bulletin 1139.)
A revision of Farmers' Bulletin 661, and suitable for general distribution.

DEPARTMENTAL BULLETINS-TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

- An Economic Study of Small Farms near Washington, D. C. By W. C. Funk, Assistant Agriculturist. Pp. 19, figs. 7. Contribution from the Office of Farm Management. June 22, 1920. (Department Bulletin 848.) Price, 5 cents.
- City Milk Plants: Construction and Arrangement. By Ernest Kelly and Clarence E. Clement, Dairy Division. Pp. 35, figs. 14. Contribution from the Bureau of Animal Industry. July 16, 1920. (Department Bulletin 849.) Price, 10 cents.

This bulletin is of interest and value to market milk distributors, and contains practical suggestions and information useful to persons intending to engage in this busi-

Cost of Producing Apples in Five Counties in Western New York, 1910-1915, By G. H. Miller, Assistant Agriculturist. Pp. 47, figs. 16. Contribution from the Office of Farm Management. July 30, 1920. (Department Bulletin **851.)** Price, 10 cents.

This study was made in the counties of Monroe, Niagara, Ontario, Orleans, and

Wayne.

The Organization and Management of Farms in Northwestern Pennsylvania. An Analysis of the Business of 422 Farms in the Vicinity of Grove City, Pa. By Earl D. Strait, Scientific Assistant, and H. M. Dixon, Assistant Agriculturist. Pp. 32, figs. 9. Contribution from the Office of Farm Management, July 20, 1920. (Department Bulletin 853.) Price, 10 cents.

A Modified Boerner Sampler. By E. G. Boerner, In Charge, Grain Investigations, and E. H. Ropes, Specialist in Grain Investigations. Pp. 8, figs. 5. Contribution from the Bureau of Markets. (Professional Paper.) June 25, 1920. (Department Bulletin 857.) Price, 5 cents.

Of interest to grain dealers and laboratory workers engaged in testing grain.

Requirements and Cost of Producing Market Milk in Northwestern Indiana. By J. B. Bain, Dairy Husbandman, and R. J. Posson, Market Milk Specialist, Dairy Division. Pp. 31, figs. 8. Contribution from the Bureau of Animal Industry. July 16, 1920. (Department Bulletin 858.) Price, 5 cents. No copies for free distribution.

A Peach-Sizing Machine. By Manley Stockton, Investigator in Marketing, and J. F. Barghausen, Investigator in Agricultural Technology. Pp. 6, figs. 6. Contribution from the Bureau of Markets. (Professional Paper.) July 28, 1920. (Department Bulletin 864. Price, 5 cents.

Of interest to growers and shippers of peaches.

Cotton Boll Weevil Control by the Use of Poison. By B. R. Coad, Entomological Assistant, and T. P. Cassidy, Cotton Entomologist, Southern Field Crop Insect Investigations. Pp. 31. Contribution from the Bureau of Entomology. July 20, 1920. (Department Bulletin 875.) Price, 5 cents.

A description of materials needed and methods used in controlling the weevil by the

use of poison.

MISCELLANEOUS.

Regulations of the Secretary of Agriculture under the United States Warehouse Act of August 11, 1916, as amended July 24, 1919. Regulations for Wool Warehouses. Pp. 31. July, 1920. (Circular 150, Office of the Secretary.) Price, 5 cents.

The Development of the Peruvian Alfalfa Industry in the United States. By H. L. Westover, Agronomist, Office of Forage-Crop Investigations. Pp. 8, figs. 2. Contribution from the Bureau of Plant Industry. June, 1920. (Department Circular 93.) Price, 5 cents.

Motion Pictures of the United States Department of Agriculture. A List of Films and Their Uses. By Fred W. Perkins, Assistant in Charge of Motion Pictures, and George R. Goergens, Chief Cinematographer. Pp. 22, il. Contribution from the Division of Publications. July, 1920. (Department Cir-

Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction, during the period from April 1 to June 30, 1916. Pp. 96, pls. 5. July 12, 1920. (Inventory No. 47: Nos. 42384-43012. Bureau of Plant Industry.) Price, 15 cents.

SERIALS.

Experiment Station Record. Vol. 42, No. 7. May, 1920. E. W. Allen, Ph. D., Editor. Pp. 601-700. Price, 15 cents.

Same, Vol. 42, No. 8. June, 1920. Pp. 701–800. Price, 15 cents. Same, Vol. 42, No. 9. Abstract Number. June 24, 1920. Pp. 801–900. Price,

Note.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Reporter. Vol. 6, No. 7, July, 1920. Pp. 61-76. (Bureau of Crop Estimates.) Price, 25 cents a year.

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock.

ANNOUNCEMENT.—Because of the small fund available for printing, it has been found necessary to drop from the mailing list of the Monthly Crop Reporter all names of persons who are not actively cooperating with the United States Department of Agriculture. Persons whose names are dropped may subscribe for this publication through the Superintendent of Documents, Washington, D. C., at the domestic rate of 25 cents per year, and 40 cents per year to foreign addresses, payable only by postal money order or cash. No checks accepted.

The Market Reporter. Vol. 1, Nos. 27 to 31, inclusive, July 3, 10, 17, 24, 31, 1920. (Bureau of Markets.) For free distribution to applicants who show

the need for it. The Market Reporter is the official marketing publication of the United States Department of Agriculture. It contains general, current, and statistical marketing information for important classes of agricultural products, both staple and perishable, which is of general interest and of permanent value alike to producers, dealers, and consumers.

Weekly News Letter.

Contains a weekly summary in popular form of the more important practical discoveries and recommendations of all bureaus of the department. Free list confined to departmental employees, official cooperators, and the press. May be purchased from the Superintendent of Documents, Government Printing Office, for 50 cents a year.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Shelby County, Alabama. By J. F. Stroud, of the Alabama Department of Agriculture and Industries, and Howard C. Smith and J. H. Agee, of the U. S. Department of Agriculture. Pp. 60, fig. 1, map. (From F. O. Soils, 1917.) Price, 15 cents.

Soil Survey of the Ventura Area, California. By J. W. Nelson and Walter C. Dean, of the University of California, and A. E. Kocher, E. B. Watson, and E. J. Carpenter, of the U. S. Department of Agriculture. Pp. 86, pls. 3, fig. 1, map. (From F. O. Soils, 1917.) Price, 15 cents.

Soil Survey of Webster County, West Virginia. By Charles N. Mooney. Pp. 24, fig. 1, map. (From F. O. Soils, 1918.) Price, 15 cents.

SERVICE AND REGULATORY ANNOUNCEMENTS-FOR SALE ONLY.

These contain only information, instructions, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. Free distribution is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendnt of Documnts, Government Printing Office, who has them for sale only, at prices noted.

Bureau of Chemistry. No. 25. Importation and Inspection of Tea. Pp. 11. July 10, 1920. Price, 5 cents.

Same. Supplement No. 70. [N. J. 6951-7000.] Pp. 427-464. July 1, 1920. Price, 10 cents.

Same. Supplement No. 71. [N. J. 7001-7050.] Pp. 1-34. July 7, 1920. Price, 10 cents.

Same. Supplement No. 72. [N. J. 7051-7100.] Pp. 37-73. July 26, 1920. Price, 10 cents.

Same. Supplement No. 73. [N. J. 7101–7150.] Pp. 75–111. July 27, 1920. Price, 10 cents.

Bureau of Markets. No. 63. Pp. 20. June 30, 1920. Price, 5 cents.

Same. No. 64. Pp. 14. July 9, 1920. Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 48, No. 4. April, 1920. [June 25, 1920.] Pp. 191-249, figs. 15, charts, 15. Price, 25 cents a copy, \$2.50 a year. Payable to the Superintendent of Documents.

Special Articles: The Thirteen tornadoes of March 28, 1920.—The four tornadoes of April 20, 1920.—The hailstorm of April 8, 1920, in Washington County, Ala. By P. H. Smyth.—Cloudiness in New York State. By E. S. Clowes.—Modifying factors in effective temperature. By A. D. Hopkins.—Climatic conditions in a greenhouse as measured by plant growth. By E. S. Johnston.—Distribution of maximum floods.—Some meteorological observations of a bombing pilot in France. By T. R. Reed.

National Weather and Crop and Snow and Ice Bulletin. Nos. 27, 28, 29, 30, July 1920, reporting weather and crop conditions throughout the United States. Issued weekly. Price, 25 cents a year.

Note.—This bulletin is furnished free of charge to public and educational institutions, libraries, newspapers, cooperative observers, weather correspondents, and to those who will post or display it for the general benefit of the public. To all others the price is 25 cents per year, payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

EDWY B. REID, Chief, Division of Publications.

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United States Department of Agriculture,

Washington, D. C., August 31, 1920.

MONTHLY LIST OF PUBLICATIONS.

[August, 1920.]

READ CAREFULLY BEFORE ORDERING.

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A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

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Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

FARMERS' BULLETINS-FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

A system of Farm Cost Accounting. By C. E. Ladd, agent, Revised by James S. Ball, Assistant in Farm Accounting. Pp. 23, figs. 3. Contribution from the Office of Farm Management. Revised, March, 1920. (Farmers' Bulletin 572.)

Suitable for general distribution.

(8)

Home Laundering. By Lydia Ray Balderston, Instructor in Laundering, Teachers College, Columbia University. Pp. 32, figs. 12. Contribution from the States Relations Service. 1920. (Farmers' Bulletin 1099.)

A plan for a home laundry with a description of the equipment needed.

Growing Irrigated Grain in Southern Idaho. By L. C. Aicher, Agronomist and Superintendent, Aberdeen Station, Aberdeen, Idaho, Office of Cereal Investigations. Pp. 28, figs. 13. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bu'letin 1103.)

Of interest to prospective settlers and to farmers in this section.

Peanut Growing for Profit. By W. R. Beattie, Horticulturist, Office of Horticultural and Pomological Investigations. Pp. 33, figs. 20. Contribution from the Bureau of Plant Industry, 1920. (Farmers' Bulletin 1127.)

Suitable for general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Experiments with Kherson and Sixty-Day Oats. By C. W. Warburton, Agronomist in Charge, and T. R. Stanton, Assistant Agronomist in Oats Investigations, Office of Cereal Investigations. Pp. 72, figs. 14. Contribution from the Bureau of Plant Industry. (Professional Paper.) May 24, 1920. (Department Bulletin 823.) Price, 15 cents.

Reports results of experiments in growing, and the present status of the Kherson and Sixty-Day Oats in the United States.

Generic Classification of the Hemipterous Family Aphididæ. By A. C. Baker, Entomologist, Deciduous Fruit Insect Investigations. Pp. 109, pls. 16. Contribution from the Bureau of Entomology. (Professional Paper.) August 10, 1920. (Department Bulletin 826.) Price, 30 cents.

This paper is the first of a series treating the Aphididæ. It will be followed by others dealing with the economic importance, biologies, and relationships of species in the different genera.

Spillways for Reservoirs and Canals. By A. T. Mitchelson, Senior Irrigation Engineer. Pp. 40, pls. 15, figs. 14. Contribution from the Bureau of Public Roads. (Professional Paper.) August 26, 1920. (Department Bulletin **832.)** Price, 30 cents.

Points out the superior advantages of the siphon spillway and describes various other types.

Capillary Movement of Soil Moisture. By Walter W. McLaughlin, Senior Irrigation Engineer. Pp. 70, figs. 10. Contribution from the Bureau of Public Roads. (Professional Paper.) Aug. 6, 1920. (Department Bulletin 835.) Price, 15 cents.

Of interest to irrigation engineers, drainage engineers, and irrigation farmers.

Sweet-Clover Seed. Part I. Pollination Studies of Seed Production. Part II. Structure and Chemical Nature of the Seed Coat and its Relation to Impermeable Seeds of Sweet Clover. By H. S. Coe, formerly Assistant Agronomist, Office of Forage-Crop Investigations, and J. N. Martin, Professor of Morphology and Cytology, Iowa State College. Pp. 39, pls. 5, figs. 6. Contribution from the Bureau of Plant Industry. (Professional Paper.) Aug. 11, 1920. (Department Bulletin 844.) Price, 15 cents.

A study of the causes of the trouble experienced in obtaining satisfactory yields of sweet-clover seed.

Roundheaded Apple-Tree Borer: Its Life History and Control. By Fred E. Brooks, Entomologist, Deciduous Fruit Insect Investigations. Pp. 42, pls. 9, figs. 5. Contribution from the Bureau of Entomology. (Professional Paper.) Aug. 9, 1920. (Department Bulletin 847.) Price, 15 cents.

Of interest to apple growers in the eastern half of the United States.

The Flow of Water in Drain Tile. By D. L. Yarnell, Senior Drainage Engineer, and Sherman M. Woodward, Professor of Mechanics and Hydraulics, State University of Iowa. Pp. 50, pls. 13. Contribution from the Bureau of Public Roads. (Professional Paper.) August 26, 1920. (Department Bulletin 854.) Price. 30 cents.

A technical discussion of the subject of interest to drainage engineers.

The Organization of Cooperative Grain Elevator Companies. By J. M. Mehl, Investigator in Cooperative Organization, and O. B. Jesness, Specialist in Cooperative Organization. Pp. 40. Contribution from the Bureau of Markets. August 30, 1920. (Department Bulletin 860.) Price, 10 cents.

Contains forms of organizations, joint stock companies, ordinary private corporations, and the cooperative form, as well as general suggestions on the subject.

A Classification of Ledger Accounts for Creameries. By George O. Knapp and Burton B. Mason, Assistants in Market Business Practice, and A. V. Swarthout, Investigator in Market Business Practice. Pp. 40. Contribution from the Bureau of Markets. Aug. 16, 1920. (Department Bulletin 865.) Price, 10 cents.

Describes in detail a classification which can be used advantageously by creameries and which is a great aid to the bookkeeper.

Pickering Sprays. By F. C. Cook, Physiological Chemist, Insecticide and Fungicide Laboratory. Pp. 47, pls. 2, fig. 1. Contribution from the Bureau of Chemistry. August 24, 1920. (Department Bulletin 866.) Price, 10 cents. Describes results of experiments conducted to determine the comparative efficacy of Pickering sprays and standard Bordeaux mixtures.

Farm Land Values in Iowa By L. C. Gray, Agricultural Economist in Charge of Land Economics, Office of Farm Management and Farm Economics, and O. G. Lloyd, Assistant Chief in Farm Management, Iowa Agricultural Experiment Station. Pp. 45. Contribution from the Office of Farm Management. (Professional Paper.) August 23, 1920. (Department Bulletin **874.)** Price, 10 cents.

A discussion of the trend of land values in general and of the causes leading to the increase in prices of Iowa farm lands, with special reference to the year 1919.

Effect of Alfalfa on the Subsequent Yields of Irrigated Field Crops. By C. S. Scofield, Agriculturist in Charge, Office of Western Irrigation Agriculture. Pp. 13. Contribution from the Bureau of Plant Industry. Aug. 10, 1920.

(Department Bulletin 881.) Price, 5 cents.

Describes experiments that justify the claim that larger crops of Irish potatoes, oats, and sugar beets can be secured from land following alfalfa than from land

following nonleguminous crops.

MISCELLANEOUS.

Rules and Regulations of the Secretary of Agriculture under the Food Products Inspection Law of May 31, 1920. Pp. 8. August, 1920. (Circular 151, Office of the Secretary.) Price, 5 cents. Supersedes Circular 144, Office of the Secretary.

Vacation on the White Mountain National Forest. Pp. 23. il. Contribution from the Forest Service. 1920. (Department Circular 100.) Price, 5 cents.

Mountain Outings on the Rainier National Forest. Pp. 26. il. Contribution from the Forest Service. 1920. (Department Circular 103.) Price, 10 cents.

United States Grades for Milled Rice Recommended by the United States Department of Agriculture. Pp. 16. Contribution from the Bureau of Markets. August, 1920. (Department Circular 133.) Price, 5 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 19, No. 8. July 15, 1920. Contents: Relative Susceptibility to Citrus-Canker of Different Species and Hybrids of the Genus Citrus, Including the Wild Relatives. (Ala-6) By George L. Peltier and William J. Frederich.—Presoak Method of Seed Treatment: A Means of Preventing Seed Injury Due to Chemical Disinfectants and of Increasing Germicidal Efficiency. (G-198) By Harry Braun. Pp. 339–392, pls. 26, figs. 9. Price, 25 cents.

Same, Vol. 19, No. 9. August 2, 1920. Contents: Daily Development of Kernels of Hannchen Barley from Flowering to Maturity at Aberdeen, Idaho. (G-199) By Harry V. Harlan.—Development of Barley Kernels in Normal and Clipped Spikes and the Limitations of Awnless and Hooded Varieties. (G-200) By Harry V. Harlan and Stephen Anthony. Pp. 393-472, pls. 9, figs. 30. Price, 20 cents.

Experiment Station Record. Vol. 43, No. 1. July, 1920. E. W. Allen, Ph. D., Editor. Pp. 1-100. Price, 15 cents.

Same, Index to Vol. 41. July-December, 1919. Pp. xxlv, 901-1007. July 30, 1920. Price, 15 cents.

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The Market Reporter. Vol. 2, Nos. 6, 7, 8, 9, August, 1920. (Bureau of Mar-For free distribution to applicants who show the need for it.

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SOIL SURVEYS.

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Soil Survey of Kent County, Delaware. By J. E. Dunn and J. M. Snyder, of the U. S. Department of Agriculture, and Elwood Hoffecker, of the Delaware Agricultural Experiment Station. Pp. 32, fig. 1, map. (From F. O. Soils, 1918.) Price, 15 cents.

Soil Survey of St. Johns County, Florida. By Arthur E. Taylor, Grove B. Jones, E. C. Hall, and Charles N. Mooney. Pp. 37, pls. 3, fig. 1, map. (From F. O. Soils, 1917.) Price, 15 cents.

Soil Survey of La Salle Parish, Louisiana By Clarence Lounsbury and R. F. Rogers. Pp. 42, pls. 2, fig. 1, map. (From F. O. Soils, 1918.) Price, 15 cents.

SERVICE AND REGULATORY ANNOUNCEMENTS-FOR SALE ONLY.

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Bureau of Animal Industry. No. 158. June, 1920. Pp. 65–74. Aug. 16, 1920. Price, 5 cents.

Bureau of Chemistry. Supplement No. 74. [N. J. 7151-7200.] Pp. 113-147. Aug. 13.

Same, Supplement No. 75. [N. J. 7201-7250.] Pp. 149-178. Aug. 16, 1920. Price, 5 cents.

Same, Supplement No. 76. [N. J. 7251–7300.] Pp. 181–213. August 16, 1920. Price, 5 cents.

Same, Supplement No. 77. [N. J. 7301-7350.] Pp. 215-246. Sept. 3, 1920. Price, 5 cents.

Same, Supplement No. 78. [N. J. 7351-7400.] Pp. 247-287. August 31, 1920. Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 48, No. 5, May, 1920. [Aug. 2, 1920.] Pp. 251-310, figs. 23, charts 14. Price, 25 cents a copy, \$2.50 a year. Payable to the Superintendent of Documents.

Special Articles: Preliminary steps in the making of free-air pressure and wind charts. By C. L. Meisinger.—Temperatures versus pressures as determinants of winds aloft. By W. R. Gregg.—Detection of storms and their travel by radio equipment. By C. N. Keyser.—Aerological observations in the West Indies. By W. R. Gregg.—The Measurement of temperature, with some remarks on other physical measurements, and applications to meteorology. By E. W. Woolard.—Shading instrument shelters. By S. D. Flora.—The standard atmosphere. By W. R. Gregg.—The most intense rainfall on record. By B. C. Kadel.—Sunshine and cloudiness in the Canal Zone. By H. G. Cornthwaite.—Humidity and hot weather. By H. G. Cornthwaite.—Optimum temperature for human energy.—Agricultural meteorology. By J. Warren Smith.

National Weather and Crop and Snow and Ice Bulletin. Nos. 31, 32, 33, 34, 35, August, 1920, reporting weather and crop conditions throughout the United States. Issued weekly. Price, 25 cents a year.

Note.—This bulletin is furnished free of charge to public and educational institutions, libraries, newspapers, cooperative observers, weather correspondents, and to those who will post or display it for the general benefit of the public. To all others the price is 25 cents per year, payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

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United States Department of Agriculture,

Washington, D. C., September 30, 1920.

MONTHLY LIST OF PUBLICATIONS.

[September, 1920.]

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FARMERS' BULLETINS-FOR FREE DISTRIBUTION.

Note.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

The Crow and Its Relation to Agriculture. By E. R. Kalmbach, Assistant Biologist. Pp. 20, figs. 4. Contribution from the Bureau of Biological Survey. August, 1920. (Farmers' Bulletin 1102.) For general distribution.

Care of Mature Fowls. By Alfred R. Lee, Animal Husbandry Division. Pp. 8, figs. 4. Contribution from the Bureau of Animal Industry. 1920. (Farmers' Bulletin 1105.) Prepared especially for members of Boys' and Girls' Poultry Clubs.

Care of Baby Chicks. By Alfred R. Lee, Poultryman, Animal Husbandry Division. Pp. 8, figs. 2. Contribution from the Bureau of Animal Industry. August, 1920. Farmers' Bulletin 1108.) Prepared especially for members of Boys' and Girls' Poultry Clubs.

Poultry Houses. By Alfred R. Lee, Poultryman, Animal Husbandry Division. Pp. 8, figs. 3. Contribution from the Bureau of Animal Industry. August, 1920. (Farmers' Bulletin 1113.)

Common Poultry Diseases. By D. M. Green, Animal Husbandry Division. Pp. 8, figs. 2. Contribution from the Bureau of Animal Industry. 1920. (Farmers' Bulletin 1114.) Prepared especially for members of Boys' and Girls' Poultry Clubs.

Selection and Care of Poultry Breeding Stock. By Rob R. Slocum, Animal Husbandry Division. Pp. 10, figs. 6. Contribution from the Bureau of Animal Industry. 1920. (Farmers' Bulletin 1116.)

Prepared especially for members of Boys' and Girls' Poultry Clubs.

Fall-Sown Oats. By C. W. Warburton, Agronomist in Charge of Oat Investigations and T. R. Stanton, Assistant Agronomist, Office of Cereal Investigations. Pp. 21, figs. 9. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1119.)

For distribution in the States of Maryland, West Virginia, Kentucky, Arkansas, and Oklahoma Southward.

Factors That Make for Success in Farming in the South. By G. L. Goodrich, Agriculturist. Pp. 31, figs. 44. Contribution from the Office of Farm Management and Farm Economics. September, 1920. (Farmers' Bulletin 1121.)

This bulletin is designed to present, by pictures, charts, and brief text, some of the more important and fundamental factors that make for success on the Southern farm.

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Lespedeza as a Forage Crop. By Lyman Carrier, Agronomist, Office of Forage-Crop vestigations. Pp. 15, figs. 5. Contribution from the Bureau of Plant Industry. 19 (Farmers' Bulletin 1143.)
Suitable for general distribution.

Cooperative Marketing. By O. B. Jesness, Specialist in Cooperative Organization. Pp. 27. Contribution from the Bureau of Markets. September, 1920. Farmers' Bulletin 1144.)

This bulletin gives suggestions for organizing cooperative marketing associations.

Dourine of Horses. By J. R. Mohler, Chief of the Bureau of Animal Industry, and H. W. Schoening, Pathological Division. Pp. 12, figs. 5. Contribution from the Bureau of Animal Industry. 1920. (Farmers' Bulletin 1146.) Suitable for general distribution.

Dry Farming in Western South Dakota. By O. R. Mathews, Assistant in Dry-Land Agriculture. Pp. 16. Contribution from the Bureau of Plant Industry. September, 1920. (Farmers' Bulletin 1163.)

Laws Relating to Fur-Bearing Animals, 1920. A Summary of Laws in the United States, Canada, and Newfoundland, Relating to Trapping, Open Seasons, Propagation, and Bounties. By George A. Lawyer, Chief United States Game Warden; Frank L. Earnshaw, Assistant, Interstate Commerce in Game; and Ned Dearborn, Assistant Biologist. Pp. 32. Contribution from the Bureau of Biological Survey. (Farmers' Bulletin 1165.)

Better Seed Corn. By C. P. Hartley, Agronomist in charge of Corn Investigations, Office of Cereal Investigations. Pp. 14, figs. 9. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1175.)

Suitable for general distribution. Of interest to dry-land farmers.

Control of the Root, Stalk, and Ear Rot Diseases of Corn. By James R. Holbert, Pathologist, Office of Cereal Investigations, and George N. Hoffer, Associate in Botany, Indiana Agricultural Experiment Station, and Pathologist and Agent Office of Cereal Investigations. Pp. 24, figs. 25. Contribution from the Bureau of Plant Industry. September, 1920. (Farmers' Bulletin 1176.

For general distribution.

DEPARTMENTAL BULLETINS-TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Supterintendent of Documents.

The Nematode Disease of Wheat Caused by Tylenchus Tritici. By L. P. Byars, formerly Pathologist, Office of Cotton, Truck, and Forage Crop Disease Investigations, in cooppration with the Office of Cereal Investigations. Pp. 40, pls. 6, figs. 6. Contribution from the Bureau of Plant Industry. (Professional Paper.) September 7, 1920. (Department Bulletin 842.) Price, 20 cents.

Of interest to wheat growers.

Currant-Grape Growing: A Promising New Industry. By George C. Husmann, Pomologist in Charge of Viticultural Investigations, Office of Horticultural and Pomological Investigations. Pp. 16, pls. 7, figs. 3. Contributions from the Bureau of Plant Industry. (Professional Paper.) September 3, 1920. (Department Bulletin 856.) Price, 10 cents. Describes the growing and handling of the so-called dried currants of commerce.

The Process of Ripening in the Tomato, Considered Especially from the Commercial Standpoint. By Charles E. Sando, formerly Junior Chemist, Horticultural and Pomological Investigations. Pp. 38, pls. 4, figs. 3. Contributions from the Bureau of Plant Industry. September 7, 1920. (Department Bulletin 859.) Price, 10 cents. Of interest to commercial growers and shippers of tomatoes.

Marketing Eastern Grapes. By Dudley Alleman, Assistant in Market Surveys. Pp. 61, figs. 3. Contribution from the Bureau of Markets. September 13, 1920. (Department Bulletin 861.) Price, 10 cents.

Discusses commercial production of grapes and methods of preparation for market, with description of the leading producing sections.

The Castor-Oil Industry. By J. H. Shrader, formerly Chemical Technologist, Office of Drug, Poisonous, and Oil Plant Investigations. Pp. 40, figs. 15. Contribution from the Bureau of Plant Industry. (Professional Paper.) September 3, 1920. (Department Bulletin 867.) Price, 10 cents.

Discusses the source of, trade and commerce in, and inspection and valuation of castor beans, and the manufacture, properties, and uses of castor oil.

The Shrinkage of Market Hay. By H. B. McClure, Specialist in Hay Marketing. Pp. 33.

The Shrinkage of Market Hay. By H. B. McClure, Specialist in Hay Marketing. Pp. 33, fig. 1. Contribution from the Bureau of Markets. September 15, 1920. (Department Bulletin 873.) Price, 5 cents.

A discussion of the various facts leading to shrinkage of market hay, with suggested

methods for prevention.

Hairy-Vetch Seed Production in the United States. By L. W. Kephart, Scientific Assistant, and Roland McKee, Assistant Agrostologist, Office of Forage-Crop Investigations. Pp. 32, figs. 7. Contribution from the Bureau of Plant Industry. (Professional Paper.) September 1, 1920. (Department Bulletin 876.) Price, 10 cents.

A technical description of a legume that is one of the best for green manuring and general soil improvement.

general soil improvement.

Australian Wheat Varieties in the Pacific Coast Area. By J. Allen Clark, Agronomist in Charge of Western Wheat Investigations, David E. Stephens, Superintendent, and Victor H. Florell, Assistant Agronomist, Office of Cereal Investigations. Pp. 25, pls. 3. Contribution from the Bureau of Plant Industry. (Professional Paper.) September 16, 1920. (Department Bulletin 877.) Price, 10 cents.

This bulletin gives the history of the introduction of Australian varieties into the United States, describes them briefly, and presents the results of experiments with them at the Sherman County Branch Station at Moro, in the Columbia Basin of Oregon, and

at the Plant Introduction Station at Chico, in the Sacramento Valley of California. Results of nursery experiments with 130 lots of Australian wheat recently introduced by the United States Department of Agriculture are presented also.

Effects of Pork-Curing Processes on Trichinae. By B. II. Ransom, Chief, Zoological Division, B. Schwartz, Assistant Zoologist, and H. B. Raffensberger, Veterinary Inspector. Pp. 37. Contribution from the Bureau of Animal Industry. September 10, 1920. (Department Bulletin 880.) Price, 5 cents.

Describes certain methods of curing pork products customarily eaten without cooking which makes them safe for consumption so far as trichinosis is concerned.

Experiments With Flax on Breaking. By Charles H. Clark, formerly Assistant Agronomist in Charge of Flax Investigations, Office of Cereal Investigations. Pp. 29, figs. 3. Contribution from the Bureau of Plant Industry. September 20, 1920. (Department Bulletin 883.) Price, 10 cents.
Of interest to flax growers.

Experiments on the Toxic Action of Certain Gases on Insects, Seeds, and Fungi. By I. E. Neifert, Junior Chemist, Insecticide and Fungicide Laboratory, Bureau of Chemistry, and G. L. Garrison, Cotton Entomologist, Bureau of Entomology. Pp. 16. Contribution from the Bureau of Chemistry and the Bureau of Entomology. September 8, 1920. (Department Bulletin 893.) Price, 5 cents.

The Western Farmer's Water Right. By R. P. Teetle, Irrigation Economist. Pp. 14. Contribution from the Bureau of Public Roads. (Professional Paper.) September 21, 1920. (Department Bulletin 913.) Price, 5 cents.

Describes the general characteristic of water rights and method of acquirement. Of interest to all irrigation farmers.

MISCELLANEOUS.

Fishing, Hunting, and Camping on the Cascade National Forest. Pp. 31. il. Contribution from the Forest Service, 1920. (Department Circular 194.) Price, 10 cents.

Status and Results of County Agent Work, Northern and Western States, 1919. By W. A. Lloyd in Charge of County Agent Work. Pp. 19, figs. 8. Contribution from the States Relations Service. September 9, 1920. (Department Circular 106.) Price, 10 cents.

Cocklebur. By Albert A. Hansen, Agronomist, Office of Forage-Crop Investigations. Pp. 6, fig. 1. Contribution from the Bureau of Plant Industry. July, 1920. (Department Circular 109.) Price, 5 cents.

Directory of Officials and Organizations Concerned with the Protection of Birds and Game, 1920. Pp. 19. Contribution from the Bureau of Biological Survey. (Department Circular 131.) Price, 5 cents.

The Government Exhibit at the 1920 National Dairy Show. Pp. 17, figs. 4. September, 1920. (Department Circular 139.)

The Selection of Seed Corn in Porto Rico. By H. C. Henricksen, Specialist in Farm Management. Pp. 22, figs. 7. September 2, 1920. (Circular 18, Porto Rico Agricultural Experiment Station.) Price, 10 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 19, No. 10. August 16, 1920. Contents: Investigations in the Ripening and Storage of Bartlett Pears. (G-201.) By J. R. Magness.—Further Data on the Orange-Rusts of Rubus. (G-202) By L. O. Kunkel.—Germ'Tree Filtrates as Antigens in the Complement-Fixation Tests. (A-51) By William S. Gochenour.—Mosaic Disease of Corn. (G-203) By E. W. Brandes. Pp. 473-521, pls. 5, figs. 5. Price, 25 cents.

Same, Vol. 19, No. 11. September 1, 1920. Contents: Genetics of Rust Resistance in Crosses of Varieties of Triticum vulgare with Varieties of T. durum and T. dicoccum. (Minn.-41) By H. K. Hayes, John H. Parker, and Carl Kurtzweil.—Line-Selection Work with Potatoes. (Mont.-7) By O. B. Whipple.—Occurrence of the Fixed Intermediate, Hordeum intermedium haxtoni, in Crosses between H. vulgare pallidum and H. distichon palmella. (G.-204) By Harry V. Harlan and H. K. Hayes, Pp. 523-H. distichon palmella. (G.-2591, pls. 10. Price, 20 cents.

Note.—Volumes 1 to 4 of the Journal of Agricultural Research were published monthly, volumes 5 to 16 weekly, volume 17 monthly, and volume 18 is being issued semi-monthly. The Journal is distributed free only to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. Th Superintendent of Documents will receive subscriptions for this publication, the price being \$1.50 per year for domestic circulation and \$2 for foreign circulation.

Experiment Station Record, Vol. 43. No. 2, August, 1920. E. W. Allen, Ph. D., Editor. Pp. 101-200. Price, 15 cents.

Same, Vol. 43. No. 3. Abstract Number. August 31, 1920. Pp. 201-300. Price, 15 cents.

Note.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Reporter. Vol. 6. No. 9. September, 1920. Pp. 93-108. (Bureau of Crop Estimates.) Price, 25 cents a year.
Contains data relating to agriculture, including estimates of acreage, conditions, yields, prices, and value of crops and live stock.

Announcement.—Because of the small fund available for printing, it has been found necessary to drop from the mailing list of the Monthly Crop Reporter all names of persons who are not actively cooperating with the United States Department of Agriculture. Persons whose names are dropped may subscribe for this publication through the Superintendent of Documents, Washington, D. C., at the domestic rate of 25 cents per year, and 40 cents per year to foreign addresses, payable only by postal money order or cash. No checks accepted.

The Market Reporter. Vol. 2, Nos. 10 to 13, inclusive, September, 1920. (Bureau of Markets.) For free distribution to applicants who show the need for it.

The Market Reporter is the official marketing publication of the United States Department of Agriculture. It contains general, current, and statistical marketing information for important classes of agricultural products, both staple and perishable, which is of general interest and of permanent value alike to producers, dealers, and consumers.

consumers.

Weekly News Letter.

Contains a weekly summary in popular form of the more important practical discoveries and recommendations of all bureaus of the department. Free list confined to departmental employees, official cooperators, and the press. May be purchased from the Superintendent of Documents, Government Printing Office, for 50 cents a year.

SOIL SURVEYS.

ATAIl requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Pulaski County, Georgia. By A. H. Meyer, and W. Edward Hearn. Pp. 25, fig. 1, map. (From F. O. Soils, 1918.) Price, 15 cents.

fig. 1, map. (From F. O. Soils, 1918.) Price, 15 cents.

Soil Survey of Madison County, Mississippi. By W. E. Tharp, E. H. Smies, and G. W. Musgrave. Pp. 37, pl. 1, fig. 1, map. (From F. O. Soils, 1917.) Price, 25 cents.

Soil Survey of the Belvidere Area, New Jersey. By Austin L. Patrick, Howard C. Smith, and J. M. Snyder, of the Department of Agriculture, and C. C. Engle, L. L. Lee, and H. A. Miller, of the Department of Conservation and Development of New Jersey. Pp. 22, pls. 4, fig. 1, map. (From F. O. Soils, 1917.) Price, 25 cents.

Soil Survey of Horry County, South Carolina. By B. W. Tillman, W. E. McLendon, H. H. Krusekopf, A. C. Anderson, Cornelius Van Duyne, and W. J. Latimer. Pp. 52, fig. 1, map. (From F. O. Soils, 1918.) Price, 35 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 48. No. 6. June, 1920. (August 30, 1920. Pp. 311-377, figs. 45, charts 12. Price, 25 cents a copy, \$2.50 a year. Payable to the Super-intendent of Documents.

Special Articles: Relation between annual precipitation and the number of the head of stock grazed per square mile. By J. Warren Smith.—New aerological apparatus. By S. P. Fergusson.—Iridescent clouds. By C. F. Brooks.—Tornado in Union County, N. C., June 20, 1920. By G. S. Lindgren.—Cold shore water owing to offshore winds. By C. F. Brooks.

National Weather and Crop and Snow and Ice Bulletin. Nos. 36, 37, 38, 39, September, 1920, reporting weather and crop conditions throughout the United States. Issued weekly. Price, 25 cents a year.

Note.—This bulletin is furnished free of charge to public and educational institutions, libraries, newspapers, cooperative observers, weather correspondents, and to those who will post or display it for the general benefit of the public. To all others the price is 25 cents per year, payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

Chief, Division of Publications.

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United States Department of Agriculture,

Washington, D. C., October 30, 1920.

MONTHLY LIST OF PUBLICATIONS.

[OCTOBER, 1920.]

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A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office,

Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct.

office is not a part of the Department of Agriculture.

FARMERS' BULLETINS-FOR FREE DISTRIBUTION.

MNOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

Drug Plants Under Cultivation. By W. W. Stockberger, Physiologist in Charge, Drug, Poisonous, and Oil Plant Investigations. Pp. 50, figs. 8. Contribution from the Bureau of Plant Industry. Revised, August, 1920. (Farmers' Bulletin 663.) Price, 10 cents. For general distribution.

How to Detect Outbreaks of Insects and Save the Grain Crops. By W. R. Walton, Entomologist in Charge of Cereal and Forage Insect Investigations. Pp. 24, figs. 14. Contribution from the Bureau of Entomology. Revised, August, 1920. (Farmers' Bulletin 835). Suitable for general distribution.

Breeds of Dairy Cattle. By H. P. Davis, Dairy Husbandman, Dairy Division. Pp. 35, figs. 20. Contribution from the Bureau of Animal Industry. Revised, September, 1920. (Farmers) Sulletin 893.) Suitable for general distribution.

Brood Coops and Appliances. By D. M. Green, Animal Husbandry Division. Pp. 8, fig Contribution from the Bureau of Animal Industry, 1920. (Farmers' Bulletin 1107.) Intended primarily for use of members of boys' and girls' poultry clubs.

Culling for Eggs and Market. By Rob R. Slocum, Animal Husbandry Division. Pp. 8, figs. 5. Contribution from the Bureau of Animal Industry, 1920. (Farmers' Bulletin

Intended primarily for use of members of boys' and girls' poultry club.

Forestry and Farm Income. By Wilbur R. Mattoon, Extension Specialist in Forestry. Pp. 35, figs. 13. Contribution from the Forest Service, 1920. (Farmers' Bulletin 1117.) Shows the increase in the farm income resulting from scientific management of farm woodlands.

Citrus Fruit Growing in the Gulf States. By E. D. Vosburg, Scientific Assistant, Office of Horticultural and Pomological Investigations. Pp. 45, figs. 12. Contribution from the Bureau of Plant Industry. September, 1920. (Farmers' Bulletin 1122.)

This bulletin contains information on the chief problems encountered by newcomers and prospective growers in starting and maintaining a citrus grove in the Gulf States. The selection of locality and site, choice of varieties, cultural methods, and the business aspects of citrus-fruit growing are among the more important problems considered.

Planning the Farmstead. By M. C. Betts and W. R. Humphries, Division of Rural Engineering. Pp. 24, figs. 8. Contribution from the Bureau of Public Roads, 1920. neering. Pp. 24, figs. 8. (Farmers' Bulletin 1132.)

The object of this bulletin is to set forth general principles involved in planning the

arrangement of the buildings of the farmstead in their relation to one another.

Feeding Garbage to Hogs. By F. G. Ashbrook, Animal Husbandry Division, and A. Wilson, formerly of Animal Husbandry Division. Pp. 26, figs. 16. Contribution from the Bureau of Animal Industry, 1920. (Farmers' Bulletin 1133.)

This bulletin sets forth the general principles necessary for success in feeding garbage.

The Beef Calf: Its Growth and Development. By E. W. Sheets, Animal Husbandry Division. Pp. 32, figs. 34. Contribution from the Bureau of Animal Industry, 1920. (Farmers' Bulletin 1135.)

Issued as a guide in developing beef calves and is intended primarily for the use of boys' and girls' clubs.

Growing Crimson Clover. By L. W. Kephart, Scientific Assistant, Office of Forage-Crop Investigations. Pp. 20, figs. 8. Contribution from the Bureau of Plant Industry, 1920. (Farmers' Bulletin 1142.)

A revision of Farmers' Bulletin 550. Suitable for distribution in the Middle Atlan-

A revision of Farmers Bulletin to tic and Southeastern States.

Cowpeas: Culture and Varieties. By W. J. Morse, Agronomist, Office of Forage-Crop Investigations. Pp. 26, figs. 10. Contribution from the Bureau of Plant Industry. September 1148) tigations. Pp. 26, figs. 10. Contribution from the Bureau of Plant Industry. September, 1920. (Farmers' Bulletin 1148.)

Supersedes Farmers' Bulletin 318 and is suitable for distribution in the Southern

States.

Waterproofing and Mildewproofing of Cotton Duck. By H. P. Holman, Assistant Chemist, B. S. Levine, Mycologist, and T. D. Jarrell, Junior Chemist, Leather and Paper Laboratory. Pp. 13, figs. 15. Contribution from the Bureau of Chemistry. October, 1920. (Farmers' Bulletin 1157.)
Suitable for general distribution.

Poison Ivy and Poison Sumac and Their Eradication. By C. V. Grant, formerly of the Office of Drug, Poisonous, and Oil Plant Investigations, and A. A. Hansen, Office of Forage-Crop Investigations. Pp. 16, figs. 6. Contribution from the Bureau of Plant Industry. October, 1920. (Farmers' Bulletin 1166.)
Suitable for general distribution.

DEPARTMENTAL BULLETINS-TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Forestry Lessons on Home Woodlands. By Wilbur R. Mattoon, Extension Specialist in Forestry, Forest Service, and Alvin Dille, Specialist in Agricultural Education, States Relations Service. Pp. 46, figs. 19. Contribution from the States Relations Service. (Professional Paper.) September 30, 1920. (Department Bulletin 863.) Price, 15

Prepared for teachers in elementary agriculture.

The Inheritance of the Length of Internode in the Rachis of the Barley Spike. By H. K. Hayes, College of Agriculture, University of Minnesota, and Henry V. Harlan, Agronomist in Charge of Barley Investigations, Office of Cereal Investigations. Pp. 26, pls. 2, figs. 2. Contribution from the Bureau of Plant Industry. (Professional Paper.) September 30, 1920. (Department Bulletin 869.) Price, 5 cents.

Effect of Winter Rations on Pasture Gains of Yearling Steers. By E. W. Sheets and R. H. Tuckwiller, Animal Husbandry Division. Pp. 20, figs. 8. Contribution from the Bureau of Animal Industry. October 20, 1920. (Department Bulletin 870.) Price, 5

A report on results of experiments made in West Virginia to ascertain the effect of different wintering rations upon subsequent pasture gains and to determine the best method and the cost of raising beef cattle in West Virginia. These results apply also to adjoining States.

Manufacturing and Laboratory Tests to Produce an Improved Cotton Airplane Fabric. By Fred Taylor, formerly Cotton Technologist, and D. E. Earle, Specialist in Cotton Classing. Pp. 48, figs. 23. Contribution from the Bureau of Markets. (Professional Paper.) October 9, 1920. (Department Bulletin 882.) Price, 10 cents.

Gives results of experiments with different varieties of cotton in the manufacture of cloth for airplane wing coverings.

Utilization of Sycamore. By W. D. Brush, Scientific Assistant. Pp. 24, pls. 4, figs. 3. Contributon from the Forest Service. October 12, 1920. (Department Bulletin 884.)

Price, 5 cents.

This bulletin gives information on the supply of sycamore, on the conditions attendant on its manufacture, and on how it may be used most advantageously.

Spotted Apple-Tree Borer. By Fred E. Brooks, Entomologist, Deciduous-Fruit Insect Investigations. Pp. 12, pls. 5, fig. 1. Contribution from the Bureau of Entomology. October 21, 1920. (Department Bulletin 886.) Price, 5 cents.

Describes the life history and habits of this insect and suggests methods of control.

Pear Borer. By Fred E. Brooks, Entomologist, Deciduous-Fruit Insect Investigations. Pp. 8, pls. 3. Contribution from the Bureau of Entomology. September 29, 1920. (Department Bulletin 887.) Price, 5 cents.

Describes an insect which also attacks the apple, and suggests methods of control.

Results of Experiments with Miscellaneous Substances Against Chicken Lice and the Dog Flea. By W. S. Abbott, Entomologist, Enforcement Insecticide Act. Pp. 15. Contribution from the Bureau of Entomology. (Professional Paper.) October 13, 1920. (Department Bulletin 888.) Price, 5 cents.

Describes results of tests of certain proprietary insecticides against chicken lice and the dog flea

and the dog flea.

Clover Stem-Borer as an Alfalfa Pest. By V. L. Wildermuth, Entomological Assistant, and F. H. Gates, Scientific Assistant, Cereal and Forage Insect Investigations. Pp. 25, pl. 1, figs. 6. Contribution from the Bureau of Entomology. (Professional Paper.) October 25, 1920. (Department Bulletin 889.) Price, 5 cents.

An account of the life history and habits of this insect and a discussion of methods of control.

of control.

Milk-Plant Equipment. By Ernest Kelly, in Charge of Market-Milk Investigations, and Clarence E. Clement, Market-Milk Specialist, Dairy Division. Pp. 42, dgs. 23. Contribution from the Bureau of Animal Industry. October 7, 1920. (Department Bulletin 890.) Price, 15 cents.

This bulletin points out some of the more important economic and sanitary problems in the handling and distribution of milk.

The Beet Leaf-Beetle. By F. H. Chittenden, Entomologist, and H. O. Marsh, Scientific Assistant, Truck-Crop Insect Investigations. Pp. 24, pls. 9. Contribution from the Bureau of Entomology. (Professional Paper.) October 25, 1920. (Department Bulletin 892.) Price, 15 cents.

Gives life history of this insect and suggests methods of control.

Manual of Design and Installation of Forest Service Water Spray Dry Kiln. By L. V. Teesdale, Engineer in Forest Products. Pp. 47, figs. 13. Contribution from the Forest Service. (Professional Paper.) October 18, 1920. (Department Bulletin 894.) Price, 10 cents

Describes a kiln in which the temperature, humidity, and circulation can be regulated independently of the others.

The Western Cabbage Flea-Beetle. By F. H. Chittenden and H. O. Marsh, Truck-Crop Insect Investigations. Pp. 21, pl. 1. Contribution from the Bureau of Entomology. (Professional Paper.) October 22, 1920. (Department Bulletin 902.) Price, 5 cents. Describes the life history and habits of this insect and suggests methods of control.

MISCELLANEOUS.

Report of the Alaska Agricultural Experiment Stations, 1918. Pp. 104, pls, 10. September 28, 1920. Price, 15 cents.

Report of the Hawaii Agricultural Experiment Station, 1919. Pp. 73, pls. 10. September 10, 1920. Price, 15 cents.

Report of the Porto Rico Agricultural Experiment Station, 1918. Pp. 24, pls. 2. September 17, 1920. Price, 5 cents.

Forest Trails and Highways of the Mount Hood Region, Oregon National Forest, Oregon. Pp. 32, il. Contribution from the Forest Service, 1920. (Department Circular 105.) Price, 10 cents.

A System of Field and Office Records for County Extension Workers. By M. C. Wilson, Agriculturist, County Agent Work, Office of Extension Work North and West. Pp. 13, figs. 6. Contribution from the States Relations Service. October, 1920. (Department Circular 107.) Price, 5 cents.

Chicory, Control and Eradication. By Albert A. Hansen, Agronomist, Weed Investigations, Office of Forage-Crop Investigations. Pp. 4, figs. 1. Contribution from the Bureau of Plant Industry. 1920. (Department Circular 108.)

Forcing and Blanching Dasheen Shoots. By Robert A. Young, Plant Introducer. Pp. 6, figs. 5. Contribution from the Bureau of Plant Industry. 1920. (Department Circular 125.) Price, 5 cents.

The Manufacture and Use of Peanut Butter. By H. C. Thompson, formerly Horticulturist, Horticultural and Pomological Investigations. Pp. 16, figs. 6. Contribution from the Bureau of Plant Industry. 1920. (Department Circular 128.) Price, 5 cents.

Milk for the Family. Pp. 4, il. Contribution from the Dairy Division and the Office of Home Economics. 1920. (Department Circular 129.)

The Hawkweeds, or Paintbrushes. By Albert A. Hansen, Agronomist in Weed Investigations. Pp. 7, figs. 2. Contribution from the Bureau of Plant Industry. October, 1920. (Department Circular 130.) Price, 5 cents.

A Mountain Vacation Land: The Washington National Forest. Pp. 10, il. Contribution from the Forest Service. (Department Circular 132.) Price, 5 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) V of Volume 16. Pp. xi-351-357. March 31, 1920. Vol. 16, No. 13. Contents and Index

Note.—Volumes 1 to 4 of the Journal of Agricultural Research were published monthly, volumes 5 to 16 weekly, volume 17 monthly, and volumes 18 is being issued semi-monthly. The Journal is distributed free only to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication. The price being \$1.50 per year for domestic circulation and \$2 for foreign circulation.

Experiment Station Record. Vol. 43, No. 4. Editor. Pp. 301-400. Price, 15 cents. September, 1920. E. W. Allen, Ph. D.,

Same, Vol. 43, No. 5. October, 1920. Pp. 401-500. Price, 15 cents.

Note.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Reporter. Vol. 6. No. 10, October, 1920. Pp. 109-120. (Bureau of Crop Estimates.) Price, 25 cents a year.
Contains data relating to agrculture, including estimates of acreage, conditions, yields, prices, and value of crops and live stock.

ANNOUNCEMENT.—Because of the small fund available for printing, it has been found necessary to drop from the mailing list of the Monthly Crop Reporter all names of persons who are not actively cooperating with the United States Department of Agriculture. Persons whose names are dropped may subscribe for this publication through the Superintendent of Documents, Washington, D. C., at the domestic rate of 25 cents per year, and 40 cents per year to foreign addresses, payable only by postal money order or cash. No checks accepted.

The Market Reporter. Vol. 2. Nos. 14 to 18, inclusive, October, 1920. (Bureau of Markets.) For free distribution to applicants who show the need for it.

The Market Reporter is the official marketing publication of the United States Department of Agriculture. It contains general, current, and statistical marketing information for important classes of agricultural products, both staple and perishable, which is of general interest and of permanent value alike to producers, dealers, and consumers consumers.

Weekly News Letter.

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SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of St. Clair County, Alabama. By R. T. Avon Burke, of the U. S. Department of Agriculture, and N. Eric Bell, of the Alabama Department of Agriculture and Industries. Pp. 46, fig. 1, map. (From F. O. Soils, 1917.) Price, 15 cents.

Soil Survey of Cheyenne County, Nebraska. By H. C. Mortlock, Louis A. Wolfanger, and George W. Hearn, of the U. S. Department of Agriculture, and L. Britton, of the Nebraska Soil Survey. Pp. 39, fig. 1, map. (From F. O. Soils, 1918.) Price, 15 cents.

SERVICE AND REGULATORY ANNOUNCEMENTS-FOR SALE ONLY.

These contain only information, instructions, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. Free distribution is limited to persons in the employ of the department, to public officials, whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale only, at prices noted.

Federal Horticultural Board. 22, 1920. Price, 10 cents. No. 68. May, June, and July, 1920. Pp. 51-111. Oct.

Bureau of Chemistry. Supplement No. 82. [N. J. 7551-7600.] Pp. 41-80. Oct. 8, 1920. Price, 10 cents.

Same, Supplement No. 83. [N. J. 7601-7650.] Pp. 81-118. Oct. 22, 1920.
Same, Supplement No. 84. [N. J. 7651-7700.] Pp. 119-159. Oct. 29, 1920. Price, 10 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 48, No. 7. July, 1920. Oct. 4, 1920. Pp. 379-438, figs. 24, charts 11. Price, 25 cents a copy, \$2.50 a year, payable to the Superintendent 24, charts 11. of Documents.

Special Articles: The Aurora of March 22–25, 1920, and associated displays. By C. F. Brooks and H. Lyman.—Note on the Height and location of the auroral spots and belt of March 24, 1920. By C. F. Brooks and C. L. Meisinger.—Auroras of 1919 in the United States. By H. Lyman.—A simple equation of general application for the normal temperature in terms of the time of day and the day of the year. By F. L. West.—Hailstorms in Nebraska. By H. G. Carter.—Large hail that fell at Kansas City, Mo., May 14, 1920. By P. Connor.—Funnel cloud over Lake Michigan, June 29, 1920. By A. H. Ward.—A smoke arch marking an increase in wind. By A. H. Ward.—Some flying experiences in "bumpy" weather in Texas. By D. P. Carlberk.—Southerly winds at high altitudes over Lansing, Mich., during sleet storms of January, 1920. By C. G. Audrus.—Exposed steel temperatures in the Tropics. By H. G. Cornthwaite.—The climate of Japan and Formosa. By E. M. Sanders.

National Weather and Crop and Snow and Ice Bulletin. Nos. 40, 41, 42, 43, October, 1920, reporting weather and crop conditions throughout the United States. Issued weekly. Price, 25 cents a year.

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HARLAN SMITH, Chief, Division of Publications.

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United States Department of Agriculture,

Washington, D. C., November 30, 1920.

MONTHLY LIST OF PUBLICATIONS.

[NOVEMBER, 1920.]

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Send all remittances to the Superintendent of Documents direct. His

office is not a part of the Department of Agriculture.

FARMERS' BULLETINS-FOR FREE DISTRIBUTION.

APNOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

Sugar-Beet Growing Under Humid Conditions. By C. O. Townsend, Pathologist in Charge of Sugar-Plant Investigations. Pp. 30, figs. 19. Contribution from the Bureau of Plant Industry. Revised August, 1920. (Farmers' Bulletin 568.)

This bulletin is intended primarily for the farmer who is taking up sugar-beet culture for the first time, but it is hoped that the suggestions herein given will be helpful to the experienced grower whose results with sugar beets have not been entirely satisfactory. factory.

Incubation of Hens' Eggs. By Harry M. Lamon, Senior Poultryman, Animal Husbandry Division. Pp. 8, figs. 5. Contribution from the Bureau of Animal Industry. 1920. (Farmers' Bulletin 1106.)

Intended primarily for use of members of boys' and girls' poultry clubs.

Preserving Eggs. By Jos. Wm. Kinghorne, Animal Husbanry Division. Pp. 8. il. Contribution from the Bureau of Animal Industry. 1920. (Farmers' Bulletin 1109.) Intended primarily for use of members of boys' and girls' poultry clubs.

Lice, Mites, and Cleanliness. By J. W. Kinghorne and D. M. Green, Animal Husbandry Division. Pp. 10, fig. 1. Contribution from the Bureau of Animal Industry. 1920.

Lice, Mites, and Cleanliness.
Division. Pp. 10, fig. 1.
(Farmers' Bulletin 1110.)

Intended primarily for use of members of boys' and girls' poultry clubs.

Management of Growing Chicks. By J. W. Kinghorne, Animal Husbandry Division. Pp. 8, figs. 7. Contribution from the Bureau of Animal Industry. 1920. (Farmers' Bulletin 1111.)

Prepared especially for members of boys' and girls' poultry clubs.

The Brown-Spot of Corn With Suggestions for Its Control. By W. H. Tisdale, Pathologist in Cereal-Disease Investigations, Office of Cereal Investigations. Pp. 9, figs. 4. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1124.) Suitable for general distribution.

Diseases of Southern Pecans. By S. M. McMurran, Assistant Pathologist, and J. B. Demaree, Scientific Assistant, Fruit-Disease Investigations. Pp. 22, figs. 23. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1129.)

This bulletin is intended to aid nurserymen, growers, and prospective growers in obtaining a more thorough and definite knowledge of the various diseases of the pecan, the extent of their distribution, and their relative importance.

Grain Sorghums: How to Grow Them. By Benton E. Rothgeb, Assistant Agronomist. Pp. 26, figs. 15. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bul-26, figs. 15. letin 1137.)

Covers the subject of Milos, Kafirs, and Feterita.

Grasshopper Control in the Pacific States. By T. D. Urbahns, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 16, figs. 11. Contribution from the Bureau of Entomology. 1920. (Farmers' Bulletin 1140.)

Describes methods of controlling this pest under various conditions.

Rice Growing in California. By Charles E. Chambliss, Agronomist in Charge of Rice Investigations, Office of Cereal Investigations. Pp. 22, figs. 10. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1141.)

A residual of Farmers' Bulletin 688, and intended for distribution among rice converge in California.

growers in California.

Growing Corn in the Southeastern States. By C. H. Kyle, Agronomist, Office of Cereal Investigations. Pp. 19. figs. 11. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1149.)

A revision of Farmers' Bulletin 729 and intended for distribution in North Carolina, South Carolina, Georgia, Florida, and Alabama.

Alsike Clover. By A. J. Pieters, Agronomist in Charge of Clover Investigations, Office of Forage Crop Investigations. Pp. 25, figs. 8. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1151.)

Describes the conditions necessary to secure a good growth of the clover; also some

harmful effects to stock.

Sugar-Beet Seed Growing in the Rocky Mountain States. By W. W. Tracy, jr., Technologist, Office of Sugar-Plant Investigations. Pp. 20, figs. 15. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1152.)

This bulletin contains suggestions regarding the commercial production of sugarbeet seed in the Rocky Mountain States.

Cowpeas: Utilization. By W. J. Morse, Agronomist, Office of Forage Crop Investigations. Pp. 23, figs. 8. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Pp. 23, figs. 8. Bulletin 1153.) Suitable for general distribution.

Aspen Borer and How to Control It. By George Hofer, Entomological Ranger, Forest Insect Investigations. Pp. 11, figs. 9. Contribution from the Bureau of Entomology. 1920. (Farmers' Bulletin 1154.)

Describes the life history and habits of this insect and suggests methods of control.

Angoumois Grain Moth. By E. A. Back, Entomologist in Charge, Stored Product Insect Investigations. Pp. 20, figs. 16. Contribution from the Bureau of Entomology. 1920. (Farmers' Bulletin 1156.)

Describes the life history and habits of this insect and suggests methods of control.

Diseases of Apples in Storage. By Charles Brooks, J. S. Cooley, and D. F. Fisher, Pathologists, Office of Fruit-Disease Investigations. Pp. 24, figs. 26. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1160.) For general distribution.

Proso, or Hog Millet. By John H. Martin, Assistant Agronomist, Office of Cereal Investigations. Pp. 15, figs. 4. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1162.)

Describes the method of cultivation, harvesting, and thrashing of this early matur-

ing millet, the seed of which is used for grain.

The Farm Lease Contract. By L. C. Gray, Agricultural Economist, and Howard A. Turner, Junior Agricultural Economist. Pp. 36. Contribution from the Office of Farm Management and Farm Economics. 1920. (Farmers' Bulletin 1164.) For general distribution.

Essentials of Animal Breeding. By George M. Rommel. Chief, Animal Husbandry vision. Pp. 38, figs. 32. Contribution from the Bureau of Animal Industry. vision. Pp. 38, figs. 32. Contribution from the Bureau of Animal Industry. 1920. (Farmers' Bulletin 1167.)

This bulletin is written in simple language for the man who breeds farm animals, who wants to learn the rudiments of the science of breeding and how to apply them

in practice.

Meadows for the Northern States. By C. V. Piper, Agrostologist in Charge, and Lyman Carrier, Agronomist, Office of Forage-Crop Investigations. Pp. 13, fig. 1. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1170.) Suitable for distribution in the area described.

Farm Slaughtering and Use of Lamb and Mutton. By C. G. Potts, Animal Husbandry Division. Pp. 32, figs. 30. Contribution from the Bureau of Animal Industry. 1920. (Farmers' Bulletin 1172.)
Suitable for general distribution.

Care and Improvement of the Farm Woods. By C. R. Tillotson, Forest Examiner. Pp. 27. figs. 7. Contribution from the Forest Service. November, 1920. (Farmers' Bulletin 1177.)

A revision of Farmers' Bulletin 711 and suitable for general distribution.

Tree Surgery. By J. Franklin Collins, Forest Pathologist, Investigations in Forest Pathology. Pp. 22, figs. 24. Contribution from the Bureau of Plant Industry. 1920. (Farmers' Bulletin 1178.) Suitable for general distribution.

Feeding Cottonseed Products to Live Stock. By E. W. Sheets and E. H. Thompson, of the Animal Husbandry Division. Pp. 18, figs. 3. Contribution from the Bureau of Animal Industry. 1920. (Farmers' Bullein 1179.)

This bulletin supersedes Farmers' Bulletin 655, "Cottonseed Meal for Beef Cattle," and is suitable for general distribution.

DEPARTMENT BULLETINS-TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Discussion by Kenneth Allen, Arthur S. Bent, F. C. Finkle, Allen Hazen, J. B. Lippincott, and H. D. Newell. Pp. 100, pls. 11. Contribution from the Bureau of Public Roads. (Professional Paper.) Oct. 28, 1920. (Department Bulletin 852.) Price, 25 The Flow of Water in Concrete Pipe.

This bulletin treats of the subject of flowing water in concrete pipes. It is based on field tests made on pipes in commercial operation. This publication is offered for use of engineers designing and measuring concrete pipes for irrigation, power, municipal, mining, or other purposes and for courts and attorneys at law interested in cases involving the carrying capacities of concrete pipes.

The Dry-Rot of Incense Cedar. By J. S. Boyce, Assistant Pathologist, Office of Investigations in Forest Pathology. Pp. 58, pls. 3, figs. 3. Contribution from the Bureau of Plant Industry. (Professional Paper.) Nov. 10, 1920. (Department Bulletin 871.) Price, 15 cents.

Suggests methods of handling tracts of this species of timber that will reduce waste. Of interest to lumbermen on the Pacific coast.

Insect Control in Flour Mills. By E. A. Back, Entomologist in Charge of Stored-Product Insect Investigations. Pp. 40, figs. 15. Contribution from the Bureau of Entomology. Nov. 11, 1920. (Department Bulletin 872.) Price, 15 cents. Of interest to millers and dealers in flour-mill products.

Varietal Experiments with Spring Wheat on the Northern Great Plains. By J. Allen Clark, Agronomist in Charge, John H. Martin, Assistant Agronomist, and Ralph W. Smith, Scientific Assistant, Western Wheat Investigations, Office of Cereal Investigations. Pp. 48, pls. 3, figs. 2. Contribution from the Bureau of Plant Industry. (Professional Paper.) Nov. 9, 1920. (Department Bulletin 878.) Price, 15 cents.

The purpose of this bulletin is to present the results obtained to date from varietal experiments with spring wheat at 11 field stations in the northern half of the Great Plains area.

Plains area.

The Mosaic Disease of Cucurbits. By S. P. Doolittle, Assistant Pathologist, Office of Cotton, Truck, and Forage Crop Disease Investigations. Pp. 69, pls. 10. Contribution from the Bureau of Plant Industry. (Professional Paper.) Nov. 15, 1920. (Department Bulletin 879.) Price, 15 cents.

This bulletin deals with the nature, transmission, and overwintering of the disease in relation to encurbits.

in relation to cucurbits.

- The Cost of Producing Cotton. (842 Records—1918.) By L. A. Moorhouse, Associate Farm Economist, and M. R. Cooper, Assistant Farm Economist. Pp. 59, figs. 10. Contribution from the Office of Farm Management and Farm Economics. Nov. 19, 1920. (Department Bulletin 896.) Price, 15 cents.

 Of interest to cotton growers generally.
- Weight Variation of Package Foods. By H. Runkel, Assistant Chemist. Pp. 20, fig. 1. Contribution from the Bureau of Chemistry. (Professional Paper.) Nov. 15, 1920. (Department Bulletin 897.) Price, 5 cents.

 Describes experiments undertaken to devise methods whereby errors in weights of package foods might be reduced to the minimum.
- Turpentine: Its Source, Properties, Uses, Transportation, and Marketing, with Recommended Specifications. By F. P. Veitch and V. E. Grotlisch. Pp. 51, pls. 5, figs. 6. Contribution from the Bureau of Chemistry. Nov. 8, 1920. (Department Bulletin 898.) Price, 15 cents. Of interest to those engaged in the production and handling of turpentine.
- The Production and Utilization of Corn Oil in the United States. By A. F. Sievers, Chemical Biologist, Drug, Poisonous, and Oil Plant Investigations. Pp. 23, figs. 11. Contribution from the Bureau of Plant Industry. (Professional Paper.) Oct. 29, 1920. (Department Bulletin 904.) Price, 5 cents. Describes the method of manufacture of corn oil and discusses its uses.
- Fumigation of Citrus Plants with Hydrocyanic Acid: Conditions Influencing Injury. By R. S. Woglum, Entomologist, Tropical and Subtropical Fruit Insect Investigations. Pp. 43, pls. 4, fig. 1. Contribution from the Bureau of Entomology. (Professional Paper.) Oct. 20, 1920. (Department Bulletin 907.) Price, 15 cents. Of interest to all citrus fruit growers.
- Hail Insurance on Farm Crops in the United States. By V. N. Valgren, Associate Agricultural Economist. Pp. 32, figs. 6. Contribution from the Office of Farm Management and Farm Economics. Nov. 17, 1920. (Department Bulletin 912.) Price, 10 cents. Describes origin and development of organizations that write hail insurance and discusses special problems connected with that kind of insurance.
- Toxicity of Barium Carbonate to Rats. By Erich W. Schwartze, Junior Pharmacologist, Pharmacological Laboratory. Pp. 11. Contribution from the Bureau of Chemistry. Nov. 12, 1920. (Department Bulletin 915.) Price, 5 cents.

 Describes the results of experiments with the use of Barium Carbonate as a rat poison.
- Sugar-Cane Juice Clarification for Sirup Manufacture. By J. K. Dale and C. S. Hudson. Pp. 15. Contribution from the Bureau of Chemistry. Nov. 9, 1920. (Department Bulletin 921.) Price, 5 cents.

 Describes a new method of clarifying sugar-cane juice and is of interest to sirup manufacturers.

manufacturers.

MISCELLANEOUS.

Directory of American Agricultural Organizations, 1920. Pp. 74. Prepared in the Office of Farm Management and Farm Economics. Price, 10 cents.

Report of the Virgin Islands Agricultural Experiment Station, 1919. By Longfield Smith, Agronomist im Charge. Pp. 16, pls. 4. Nov. 5, 1920. Price, 5 cents.

Cooperative Relations in Agricultural Development. Address of E. T. Meredith, Secretary of Agriculture, before the Land-Grant College Association, Springfield, Mass., October 20, 1920. Pp. 13. November, 1920. (Circular 153, Office of the Secretary.)

The Work of the Umatilla Reclamation Project Experiment Farm in 1918 and 1919. By H. K. Dean, Farm Superintendent. Pp. 24, figs. 6. Contribution from the Bureau of Plant Industry. 1920. (Department Circular 110.) Price, 5 cents.

Potato Wart. By G. R. Lyman, L. O. Kunkel, and C. R. Orton. Pp. 19, figs. 4. Contribution from the Bureau of Plant Industry. 1920. (Department Circular 111.) Price,

Live-Stock Grazing as a Factor in Fire Protection on the National Forests. By John II. Hatton, Assistant District Forester. Pp. 11, pls. 5, fig. 1. Contribution from the Forest Service. September, 1920. (Department Circular 134.) Price, 10 cents.

Maintenance of the Fur Supply. By Ned Dearborn, Assistant Biologist. Pp. 12, pls. 9. Contribution from the Bureau of Biological Survey. November, 1920. (Department Circular 135.) Price, 10 cents.

Statistics of Cooperative Extension Work, 1920-21. Pp. 18. Contribution from the States Relations Service. November, 1920. (Department Circular 140.) Price, 5 cents.

Tuberculosis Eradication under the Accredited-Herd Plan. Herd List No. 3. By J. A. Kiernan, Chief, Tuberculosis Eradication Division. Pp. 52. Contribution from the Bureau of Animal Industry. Revised to June 30, 1920. (Department Circular 142.) 10 cents.

A list of herds, all breeds, officially accredited as free from tuberculosis.

Same. Supplement 2 to Herd List No. 3. By J. A. Kiernan, Chief, Tuberculosis. Eradication Division. Pp. 49. Contribution from the Bureau of Animal Industry. Revised to June 30, 1920. (Department Circular 144.) Price, 10 cents.

Cooperative Cane-Sirup Canning: Producing Sirup of Uniform Quality. By J. K. Dale. Pp. 19. Contribution from the Bureau of Chemistry. November, 1920. (Department Circular 149.) Price, 5 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 20, No. 1. October 1, 1920. Contents: Fusarium-Blight (Scab) of Wheat and Other Cereals. (Wis.-18.) By Dimitr Atanasoff.—Cause of Lime-Induced Chlorosis and Availability of Iron in the Soil. (B-16.) By P. L. Gile and J. O. Carrero.—An Experimental Study of Echinacea Therapy. (A-52.) By James F. Couch and Leigh T. Giltner. Pp. 1-84, pls. 5. Price, 20 cents.

Price, 20 cents.

Same, Vol. 20, No. 2. October 15, 1920. Contents: Investigations of the Germicidal Value of Some of the Chlorin Disinfectants. (A-53.) By F. W. Tilley.—A New Avocado Weevil from the Canal Zone. (K-85.) By H. F. Dietz and H. S. Barber.—Studies in Mustard Seeds and Substitutes: I. Chinese Colza (Brassica campestris chinoleifera Viehoever). (E-13.) By Arno Viehoever, Joseph F. Olevenger, and Clare Olin Ewing.—Study of Some Poultry Feed Mixtures with Reference to Their Potential Acidity and Their Potential Alkalinity. (N. C.-14.) By B. F. Kaupp and J. E. Ivey.—The Influence of Cold in Stimulating the Growth of Plants. (G-205.) By Frederick V. Coville. Pp. 85-160, pls. 28. Price, 30 cents.

**PNOTE.*—Volumes 1 to 4 of the Journal of Agricultural Research were published monthly, volumes 5 to 16 weekly, and volume 17 monthly. Beginning with volume 18, the issue is semi-monthly. The Journal is distributed free only to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$1.50 per year for domestic circulation and \$2 for foreign circulation.

Experiment Station Record. Vol. 43, No. 6. Abstract Number. Nov. 12, 1920. E. W.

Experiment Station Record. Vol. 43, No. 6. Abstract Number. Nov. 12, 1920. E. W. Allen, Ph. D., Editor. Pp. 501-600. Price, 15 cents.

TNOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superinference of the connection with public institutions. free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Reporter. Vol. 6. No. 11, November, 1920. Pp. 121-132. (Bureau of Crop Estimates.) Price, 25 cents a year.

Contains data relating to agriculture, including estimates of acreage, conditions, yields, prices, and value of crops and live stock.

ANNOUNCEMENT.—Because of the small fund available for printing, it has been found necessary to drop from the mailing list of the Monthly Crop Reporter all names of persons who are not actively cooperating with the United States Department of Agriculture. Persons whose names are dropped may subscribe for this publication through the Superintendent of Documents, Washington, D. C., at the domestic rate of 25 cents per year, and 40 cents per year to foreign addresses, payable only by postal money order or cash. No checks accepted.

The Market Reporter. Vol. 2. Nos. 18-21, inclusive, November. 1920. (Bureau of Markets.) For free distribution to applicants who show the need for it.

The Market Reporter is the official marketing publication of the United States Department of Agriculture. It contains general, current, and statistical marketing information for important classes of agricultural products, both staple and perishable, which is of general interest and of permanent value alike to producers, dealers, and consumers.

Weekly News Letter.

Contains a weekly summary in popular form of the more important practical discoveries and recommendations of all bureaus of the department. Free list confined to departmental employees, official cooperators, and the press. May be purchased from the Superintendent of Documents, Government Printing Office, for 50 cents a year.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Fayette County, Alabama. By A. M. O'Neal, jr., and F. O. Hooton, of the Alabama Department of Agriculture and Industries, and T. M. Bushnell, of the U. S. Department of Agriculture. Pp. 40, fig. 1, map. (From F. O. Soils, 1917.) Price, 15 cents.

Soil Survey of the Middle Gila Valley Area, Arizona. By E. C. Eckmann, Mark Baldwin. and E. J. Carpenter. Pp. 37, pls. 3, fig. 1, map. (From F. O. Soils, 1917.) Price, 25 cents.

Soil Survey of Lowndes County, Georgia. By David D. Long, of the Georgia State College of Agriculture, and N. M. Kirk, of the U. S. Department of Agriculture. Pp. 36, fig. 1. map. (From F. O. Soils, 1917.) Price, 15 cents.

Soil Survey of Pierce County, Georgia. By E. T. Maxon and N. M. Kirk. Pp. 29, fig. 1, map. (From F. O. Soils, 1918.) Price, 15 cents.

Soil Survey of Nez Perce and Lewis Counties, Idaho. By J. H. Agee, of the U. S. Department of Agriculture, and P. P. Peterson, of the University of Idaho. Pp. 37, pls. 3. figs. 2, map. (From F. O. Soils, 1917.) Price, 25 cents.

Soil Survey of Lincoln County, Missouri. By A. T. Sweet and H. W. Hawker, of the U. S. Department of Agriculture, and E. W. Knobel and J. B. Fehsenfelt, of the University of Missouri. Pp. 44, pls. 3, fig. 1, map. (From F. O. Soils, 1917.) Price, 15 cents.

Soil Survey of Chenango County, New York. By E. T. Maxon, of the U. S. Department of Agriculture, and William Seltzer, of the New York State College of Agriculture. Pp. 37, fig. 1, map. (From F. O. Soils, 1918.) Price, 15 cents.

Soil Survey of Bertie County, North Carolina. By R. C. Jurney, of the U. S. Department of Agriculture, and S. O. Perkins, of the North Carolina Department of Agriculture. Pp. 34, fig. 1, map. (From F. O. Soils, 1918.) Price, 15 cents.

Soil Survey of Sandusky County, Ohio. By E. R. Allen, Guy Conrey, W. C. Boardman, Oliver P. Gossard, and G. K. Sivaslian, of the Ohio Agricultural Experiment Station, and Charles N. Mooney, of the U. S. Department of Agriculture. Pp. 64, fig. 1, map. (From F. O. Soils, 1917.) Price, 25 cents.

Soil Survey of Braxton and Clay Counties, West Virginia. By W. J. Latimer, In Charge, and Charles N. Mooney. Pp. 39, fig., map. (From F. O. Soils, 1918.) Price, 15 cents.

SERVICE AND REGULATORY ANNOUNCEMENTS-FOR SALE ONLY.

These contain only information, instructions, and notices governing the enforcement of the food and drugs act, meat inspection. 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. Free distribution is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office. who has them for sale only, at prices noted.

Bureau of Animal Industry. No. 161. September, 1920. Pp. 105-113. Nov. 6, 1920. Price, 5 cents.

No. 36. P. 1. Nov. 22, 1920. Price, 5 cents. Biological Survey.

Bureau of Chemistry. Supplement 85. [N. J. 7701-7750.] Pp. 161-202. Nov. 11, 1920. Price, 10 cents.

Same, Supplement 86. [N. J. 7751-7800.] Pp. 203-240. Nov. 26, 1920. Price, 10 cents.

Insecticide and Fungicide Board. No. 31. Pp. 697-722. Nov. 10, 1920. Price, 5 cents.

REPORTS.

Report of the Secretary of Agriculture, 1920. Pp. 72.
Report of the Chief of the Division of Accounts and Disbursements, 1920. Pp. 3.
Report of the Chief of the Bureau of Animal Industry, 1920. Pp. 69.
Report of the Chief of the Bureau of Biological Survey, 1920. Pp. 36.
Report of the Chief of the Bureau of Crop Estimates, 1920. Pp. 22.
Report of the Entomologist, 1920. Pp. 36.
Report of the Entomologist, 1920. Pp. 36.
Report of the Federal Horticultural Board, 1920. Pp. 29.
Report of the Forester, 1920. Pp. 34.
Report of the Insecticide and Fungicide Board, 1920. Pp. 6.
Report of the Librarian, 1920. Pp. 18.
Report of the Chief of the Bureau of Markets, 1920. Pp. 37.
Report of the Chief of the Bureau of Plant Industry, 1920. Pp. 62.
Report of the Chief of the Bureau of Public Roads, 1920. Pp. 39.
Report of the Chief of the Bureau of Soils, 1920. Pp. 21.
Report of the Solicitor, 1920. Pp. 29.
Report of the Solicitor, 1920. Pp. 29.
Report of the Director of the States Relations Service, 1920. Pp. 45.
Report of the Director of the States Relations Service, 1920. Pp. 24.

SEPARATES.

How to Use Market Stations. By G. B. Fiske, Bureau of Markets. Pp. 21, figs. 5. aratle 797, Yearbook, 1919.) Price, 5 cents.

Practical Points in Hog Cholera Control. By T. P. White, Bureau of Animal Industry. Pp. 8, figs. 2. (Separate 798, Yearbook, 1919.) Price, 5 cents.

Electric Light and Power in the Farm Home. By A. M. Daniels, Bureau of Public Roads. Pp. 16, figs. 10. 1920. (Separate 799, Yearbook, 1919.) Price, 5 cents.

Common Sense in Poultry Keeping. By Rob R. Slocum, Bureau of Animal Industry. Pp. 11, figs. 7. (Separate 800, Yearbook, 1919.) Price, 5 cents.

Prewar Crop Estimates in Germany. By Alonzo Englebert Taylor, Assistant to the Secretary of Agriculture. Pp. 8, 1920. (Separate 801, Yearbook, 1919.) Price, 5 cents.

Progress in Eradicating Contagious Animal Diseases. By John R. Mohler, Chief, Bureau of Animal Industry. Pp. 20, figs. 8. (Separate 802, Yearbook, 1919.) Price, 5 cents.

Atmospheric Nitrogen for Fertilizers. By R. O. E. Davis, Bureau of Soils. Pp. 7. (Separate 803, Yearbook, 1919.) Price, 5 cents.

Farm Practices in Growing Wheat. A Geographical Presentation. By J. H. Arnold and R. W. Spafford, Office of Farm Management. Pp. 28, figs. 5, maps 22. (Separate 804, Yearbook, 1919.) Price, 5 cents.

Three Centuries of Tobacco. By George K. Holmes, Bureau of Crop Estimates. Pp. 26. (Separate 805, Yearbook, 1919.) Price, 5 cents.

The Open Road Through the Nation's Forest. By John L. Cobbs. ir., Forest Service. Pp.

The Open Road Through the Nation's Forest. By John L. Cobbs, jr., Forest Service. Pp. 12, figs. 8. (Separate 806, Yearbook, 1919.) Price, 5 cents.

Influence of Depreciation of Exchange on Agricultural Production. By Alonzo Englebert Taylor, Assistant to the Secretary. Pp. 8. (Separate 807, Yearbook, 1919.) Price, 5

Marketing and Purchasing Demonstrations in the South. By Bradford Knapp, Chief, Office of Extension Work in the South, States Relations Service. Pp. 18. (Separate 808, Yearbook, 1919.) Price, 5 cents.

Federal Supervision of Live-Stock Markets. By Louis D. Hall, Bureau of Markets. Pp. 10, figs. 3. (Separate 809, Yearbook, 1919.) Price, 5 cents.

The Toll of Tuberculosis in Live Stock. By J. A. Kiernan and L. B. Ernest, Bureau of Animal Industry. Pp. 12, il. (Separate 810, Yearbook, 1919.) Price, 5 cents.

Why Produce Inspection Pays. By H. E. Kramer and G. B. Fiske, Bureau of Markets. Pp. 16, figs. 5. (Separate 811, Yearbook, 1919.) Price, 5 cents.

The Reorganization of the Country School. By Alvin Dille, States Relations Service. Pp. 18, figs. 4. (Separate 812, Yearbook, 1919.) Price, 5 cents.

18, figs. 4. (Separate 812, Yearbook, 1919.) Price, 5 cents.

Cooperative Improvement of Citrus Varieties. By A. D. Shamel, Bureau of Plant Industry. Pp. 27, figs. 15. (Separate 813, Yearbook, 1919.) Price, 5 cents.

Home Production of Lime by the Farmer. By C. C. Fletcher, Bureau of Soils. Pp. 7, figs. 5. 1920. (Separate 814, Yearbook, 1919.) Price, 5 cents.

What the Farmer Should Expect from the Seedsman. By Edgar Brown, Bureau of Plant Industry. Pp. 4. 1920. (Separate 815, Yearbook, 1919.) Price, 5 cents.

Harnessing Heredity to Improve the Nation's Live Stock. By D. S. Burch, Bureau of Animal Industry. Pp. 8, figs. 2. (Separate 816, Yearbook, 1919.) Price, 5 cents.

The Fight Against the Pink Bollworm in the United States. By W. D. Hunter, Bureau of Entomology. Pp. 14, figs. 4. (Separate 817, Yearbook, 1919.) Price, 5 cents.

Selling Purebred Stock to South America. By David Harrell and H. P. Morgan, Bureau of Markets. Pp. 12, il. (Separate 818, Yearbook, 1919.) Price, 5 cents.

Farmers' Purchase Power: How Organized. By J. H. Mehl, Bureau of Markets. Pp. 10

Farmers' Purchase Power: How Organized. By J. H. Mehl, Bureau of Markets. Pp. 10. (Separate 819, Yearbook, 1919.) Price, 5 cents.

Live-Stock Drought Relief Work in 1919. By George M. Rommel, Chief, Animal Husbandry Division, Bureau of Animal Industry. Pp. 15, il. (Separate 820, Yearbook, 1919.) Price, 5 cents.

ck Conditions in Europe. By Turner Wright, Bureau of Markets, and George Bureau of Animal Industry. Pp. 15, il. (Separate 821, Yearbook, 1919.) Pr Live-Stock Conditions in Europe. 5 cents.

Community Tile Drainage Construction. By John R. Haswell, Bureau of Public Roads. Pp. 15, figs. 4. (Separate 822, Yearbook, 1919.) Price, 5 cents.

Trapping on the Farm. By Ned Dearborn, Bureau of Biological Survey. Pp. 34, figs. 22. (Separate 823, Yearbook, 1919.) Price, 5 cents.

Securing a Dry Cellar. By George M. Warren, Hydraulic Engineer, Bureau of Public Roads. Pp. 25, figs. 21. (Separate 824, Yearbook, 1919.) Price, 5 cents.

The Horse Power Problem on the Farm. By Oscar A. Juve, Office of Farm Management. Pp. 11, il. (Separate 825, Yearbook, 1919.) Price, 5 cents.

Statistics of Grain Crops, 1919. By Bureau of Crop Estimates. Pp. 68. Yearbook, 1919.) Price, 10 cents. (Separate 826.

Statistics of Crops Other Than Grain Crops. Bureau of Crop Estimates. Pp. 76. (Separate 827, Yearbook, 1919.) Price, 10 cents.

Statistics of Live Stock, 1919. Pp. 38. Bureau of Crop Estimates. (Separate 828, Yearbook, 1919.) Price, 5 cents.

Imports and Exports of Agricultural Products. Bureau of Crop Estimates. Pp. 39. (Separate 829, Yearbook, 1919.) Price, 5 cents.

Miscellaneous Agricultural Statistics, 1919. Pp. 54. (Separate 830, Yearbook, 1919.) Price, 5 cents.

5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 48, No. 8. August, 1920. Oct. 28, 1920. Pp. 439-493, figs. 18, charts 12. Price, 25 cents a copy, \$2.50 a year. Payable to the Superintendent of Documents.

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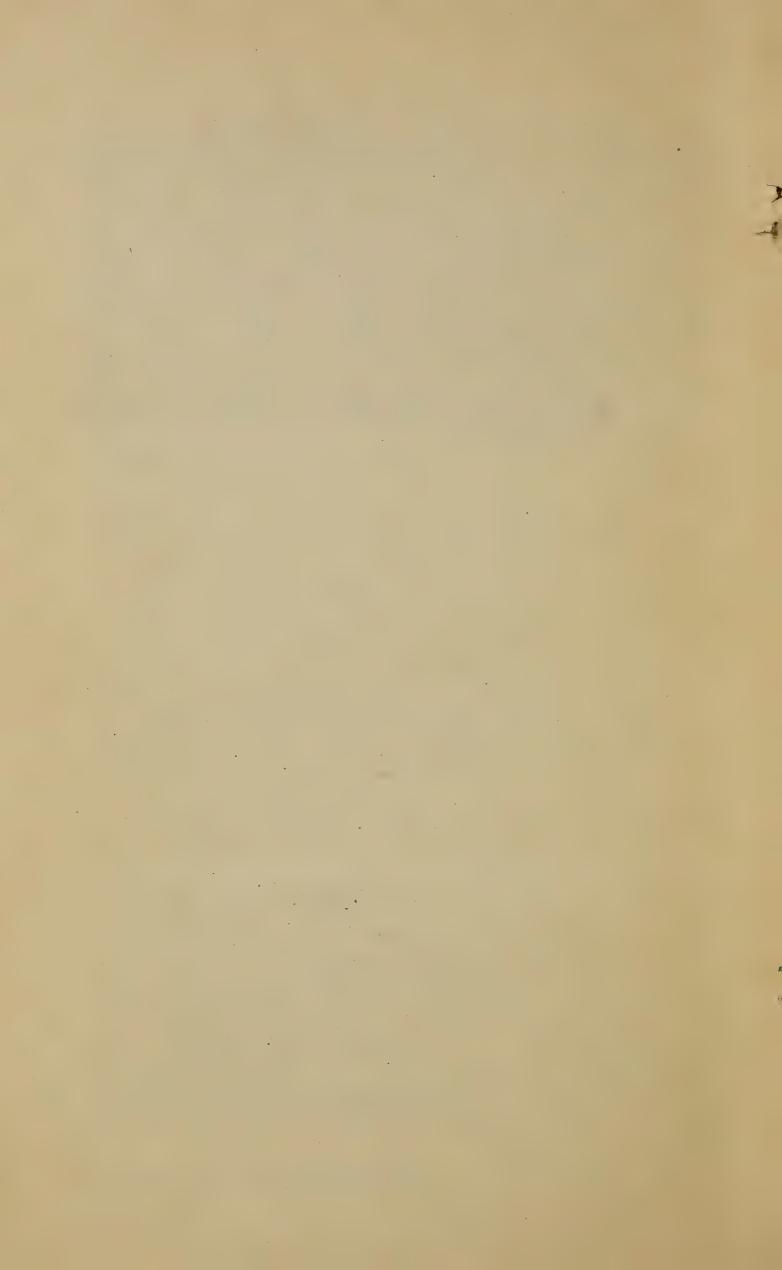
Special articles: Mathematical inquiry into the effect of weather on corn yield in the eight corn-belt States. By H. A. Wallace.—Damage to crops by weather. By J. Warren Smith.—Weather and crops in Arkansas, 1819 to 1879. By W. C. Hickmon.—Hailstorm at Lehi, Utah. By J. C. Alter.—Lightning in a potato field. By E. S. Johnston.—Lightning and forest fires. By A. H. Palmer.—Notes on cloud photography. By W. S. Davis.—Apparatus and methods for cloud photography. By A. J. Weed.—Photography of clouds.—Cloud photography.—Tables of sunspot frequency for the years 1902–1919. By A. Wolfer.—Smudging as a protection from frost. By H. H. Kimball and F. D. Young.—The principle of the conservation of angular momentum as applied to atmospheric motions. By H. W. Clough.

National Weather and Crop and Snow and Ice Bulletin. Nos. 44, 45, 46, 47, 48, November, 1920, reporting weather and crop conditions throughout the United States. Issued weekly. Price, 25 cents a year.

Note.—This bulletin is furnished free of charge to public and educational institutions, libraries, newspapers, cooperative observers, weather correspondents, and to those who will post or display it for the general benefit of the public. To all others the price is 25 cents per year, payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

JNO. L. Cobbs, Jr.,

JNO. L. COBBS, Jr., Chief, Division of Publications.



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This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., December 31, 1920.

MONTHLY LIST OF PUBLICATIONS.

[DECEMBER, 1920.]

READ CAREFULLY BEFORE ORDERING.

Send no remittances to the U.S. Department of Agriculture.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His

office is not a part of the Department of Agriculture.

FARMERS' BULLETINS-FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

Peanut Oil. By H. C. Thompson, Formerly Horticulturist, Office of Horticultural and Pomological Investigations, Bureau of Plant Industry, and H. S. Bailey, Formerly Food-Investigation Chemist, Bureau of Chemistry. Pp. 18. Joint contribution from the Bureau of Plant Industry and the Bureau of Chemistry. Revised December, 1920, by J. H. Beattie and F. E. Miller, of the Office of Horticultural and Pomological Investigations, Bureau of Plant Industry. (Farmers' Bulletin 751.)

Suitable for general distribution.

Selection and Preparation of Fowls for Exhibition. By Jos. Wm. Kinghorne, Animal Husbandry Division. Pp. 11, figs. 7. Contribution from the Bureau of Animal Industry. September, 1920. (Farmers' Bulletin 1115.)

Intended for beginners and especially for members of Boys' and Girls' Poultry Clubs.

Parasites and Parasitic Diseases of Sheep. By Maurice C. Hall, Zoological Division. Pp. 53, figs. 34. Contribution from the Bureau of Animal Industry. December, 1920. (Farmers' Bulletin 1150.)

This bulletin describes the various external and internal parasites of sheep, and discusses means of prevention. For general distribution.

One-Register Furnaces. By A. M. Daniels, Assistant Mechanical Engineer, Division of Rural Engineering. Pp. 12, figs. 6. Contribution from the Bureau of Public Roads. December, 1920. (Farmers' Bulletin 1174.)

This bulletin discusses the principles and the advantages and disadvantages of the one-register warmair house-heating system. It explains the system, illustrates the circulation of cold and warm air in the rooms, and points out conditions under which satisfactory service can be expected.

Farm Inventories. By J. S. Ball, Junior Farm Economist. Pp. 31, figs. 3. Contribution from the Office of Farm Management and Farm Economics, December, 1920. (Farmers' Bulletin 1182.)

The various uses of farm inventories are explained in this Bulletin, which presents complete and explicit directions as to how to make, use, and care for a farm property book. Suitable for general distribution.

The Care of Leather. By F. P. Veitch, chemist in charge, H. P. Holmes and R. W. Frey, assistant chemists, Leather and Paper Laboratory. Pp. 18, figs. 13. Contribution from the Bureau of Chemistry. December, 1920. (Farmers' Bulletin 1183.)

This bulletin contains suggestions for a judicious selection of articles made from leather and tells how to care for them in order to obtain the maximum service. Suitable for general distribution.

Spraying for the Alfalfa Weevil. By Geo. L. Reeves, Entomological Assistant, T. R. Chamberlin, Scientific Assistant, and K. M. Pack, Field Assistant, Cereal and Foreign Insect Investigations. Pp. 20, figs. 9. Contribution from the Bureau of Entomology. December, 1920. (Farmers' Bulletin 1185.)

This bulletin, devoted chiefly to a description and illustration of the control of the alfalfa weevil by means of arsenical sprays, is intended for the man who is already well acquainted with the appearance of the pest and its effect upon his crop.

DEPARTMENTAL BULLETINS-TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Food Habits of Seven Species of American Shoal-Water Ducks. By Douglas C. Mabbott, Assistant in Economic Ornithology. Pp. 67, pls. 7. Contribution from the Bureau of Biological Survey. (Professional Paper.) Dec. 30, 1920. (Department Bulletin 862.) Price, 25 cents.

Treats of the food habits of certain species of American Shoal-Water Ducks, and contains suggestions to be heeded in attempting to establish successful propagation of some of them in inclosures. Of interest to students and those engaged in duck farming.

The Black Fly of Citrus and Other Subtropical Plants. By Harry F. Dietz, entomological inspector, and James Zetek, entomologist, The Panama Canal. Pp. 55, pls. 11, figs. 7. Contribution from the Bureau of Entomology. Dec. 11, 1920. (Department Bulletin 885.) Price, 20 cents.

Describes the life-history and habits of this pest, and suggests methods for its control. Of interest to citrus fruit growers generally.

Gipsy Moth Tree-Banding Material: How to Make, Use, and Apply It. By C. W. Collins, entomological assistant, and Clifford E. Hood, scientific assistant, Gipsy Moth and Brown-Tail Moth Investigations. Pp. 18, pls. 7, figs. 4. Contribution from the Bureau of Entomology. Dec. 14, 1920. (Department Bulletin 899.) Price, 15 cents.

Contains conclusions and recommendations on the making, use, and application of tree-banding material, for the control of the gipsy moth.

Grapevine Looper. By Dwight Isely, scientific assistant, Deciduous Fruit Insect Investigations. Pp. 15, pls. 4. Contribution from the Bureau of Entomology. (Professional Paper.) Dec. 11, 1920. (Department Bulletin 900.) Price, 5 cents. A technical publication describing the life history, habits, and economic importance of this pest, with measures for its control.

Grapevine Flea-Beetles. By Dwight Isely, scientific assistant, Deciduous Fruit Investigations. Pp. 27, pls. 4. (Professional Paper.) Dec. 13, 1920. (Department Bulletin 901.) Price, 10 cents.

A technical publication of interest to entomologists and investigators generally.

Principles of Live-stock Breeding. By Sewall Wright, Animal Husbandry Division. Pp. 67, figs. 25. Contribution from the Bureau of Animal Industry. Dec. 8, 1920. (Department Bulletin 905.) Price, 15 cents.

Suitable for general distribution.

Experience of Eastern Farmers with Motor Trucks. By H. R. Tolley, Scientific Assistant, and L. M. Church, Assistant in Farm Accounting. Pp. 37, figs. 3. Contribution from the Office of Farm Management and Farm Economics. Dec. 10, 1920. (Department Bulletin 910.) Price, 10 cents.

This bulletin is based on the experience with motor trucks of 753 farmers in the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, and Maryland. It discusses the advantages and disadvantages of the motor truck on the farm, together with the effect of the different kinds of roads on the use of trucks, and the cost of hauling and operation, with the saving in hired help. Of general interest.

Life History of the Grape-Berry Moth in Northern Ohio. By H. G. Ingerson, scientific assistant, Deciduous Fruit Insect Investigations. Pp. 38, figs. 5. Contribution from the Bureau of Entomology. (Professional Paper.) Dec. 13, 1920. (Department Bulletin 911.) Price, 10 cents.

Contains the miscellaneous record with summary of a series of studies made in 1916, 1917, and 1918, on the life history of this moth, with a recommendation for control measures.

The Red-Banded Leaf-Roller. By F. H. Chittenden, entomologist in charge, Truck Crop Insect Investigations. Pp. 14, figs. 5. (Professional Paper.) Dec. 9, 1920. (Department Bulletin 914.) Price, 5 cents.

Contains a description of this pest with a history of the species and recommendations for its control.

Unit Requirements for Producing Milk in Western Washington. By J. B. Bain, dairy husbandman, and G. E. Braun, market milk specialist, Dairy Division. Pp. 19. Contribution from the Bureau of Animal Industry. Dec. 10, 1920. (Department Bulletin 919.) Price, 5 cents.

A study of the cost of milk production in Skagit County, Washington. Of interest to dairymen generally.

Farm Profits. By H. M. Dixon, associate farm economist and H. W. Hawthorne, assistant farm economist. Pp. 56, figs. 19. Contribution from the Office of Farm Management and Farm Economics. (Professional Paper.) Dec. 30, 1920. (Department Bulletin 920.) Price, 15 cents.

This bulletin contains figures from the same farms for a series of years, as follows: Washington County Ohio, 25 farms, 1912–1918. Clinton County, Indiana, 100 farms, 1910 and 1913–1918. Dane County Wisconsin, 60 farms, 1913–1917.

Clover-Leaf Weevil. By D. G. Tower and F. A. Fenton, Cereal and Forage Crop Insect Investigations Pp. 18, figs. 9. Contribution from the Bureau of Entomology. (Professional Paper.) Dec. 21, 1920. (Department Bulletin 922.) Price, 5 cents. Describes life history and habits of the insect and suggests methods of control.

The Production of Binder-Twine Fiber in the Philippine Islands. By H. T. Edwards, Specialist in Fiber-Plant Production, Office of Fiber-Plant Investigations. Pp. 19, figs, 4. Contribution from the Bureau of Plant Industry. (Professional Paper.) Dec. 30, 1920. (Department Bulletin 930.) Price, 5 cents.

Discusses the Binder-Twine Fiber situation with respect to the Philippine Islands as a source of supply.

MISCELLANEOUS.

Report of the Alaska Agricultural Experiment Stations, 1919. Pp. 90, pls. 15. Dec. 27, 1920. Price, 25 cents.

The work of the Newlands Reclamation Project Experiment Farm in 1919. By F. B. Headley, Farm Superintendent. Pp. 21, figs. 3. Contribution from the Bureau of Plant Industry. November, 1920. (Department Circular 136.) Price, 5 cents.

The Bureau of Chemistry of the United States Department of Agriculture. Organization, Enforcement of Food and Drugs Act, Enforcement of Tea Act, Research Work. Pp. 23, figs. 4. Contribution from the Bureau of Chemistry. December, 1920. (Department Circular 137.) Price, 5 cents.

Tuberculosis Eradication Under the Accredited Herd Plan. Supplement 1 to Herd List No. 3. By J. A. Kiernan, Chief, Tuberculosis Eradication Division. Pp. 98. Contribution from the Bureau of Animal Industry. Revised to June 30, 1920. (Department Circular 143.) Price, 10 cents.

Markets for American Fruits in China, with Recommendations for American Shippers. By Clarence W. Moomaw, specialist in foreign marketing, and Majorie L. Franklin, scientific assistant. Pp. 27, figs. 9. Contribution from the Bureau of Markets. December, 1920. (Department Circular 146.) Price, 10 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 20, No. 5, Dec. 1, 1920. Contents: Permanence of Difference in the Plots of an Experimental Field. (vr G-212.) By J. Arthur Harris and C. S. Schofield.—Some Changes in Florida Grapefruit in Storage. (vs. G-213.) By Lon A. Hawkins and J. R. Magness.—A Bacteriological Study of Canned Ripe Olives. (vy. E-14.) By Stewart A. Koser.—Relation of the Soil Solution to the Soil Extract. (vv. Calif.-25.) By D. R. Hoagland, J. C. Martin, and G. R. Stewart.—Effect of Season and Crop Growth on the Physical State of the Soil. (vw. Calif.-26.) By D. R. Hoagland and J. C. Martin. Pp. 335-404, figs. 6. Price, 15 cents.

Experiment Station Record. Vol. 43. No. 7, November, 1920. E. W. Allen, Ph. D., Editor. Pp. 601-700. Price, 15 cents.

Same. Vol. 43. No. 8, December, 1920. Pp. 701-800. Price, 15 cents.

Note.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Reporter. Vol. 6, No. 12, December, 1920. Pp. 133-152. (Bureau of Crop Estimates.) Price, 25 cents a year.

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock; also the summary of crop production for 1920 and the index to volume 6.

ANNOUNCEMENT.—Because of the small fund available for printing it has been found necessary to drop from the maiiing list of the Monthly Crop Reporter all names of persons who are not actively cooperating with the United States Department of Agriculture. Persons whose names are dropped may subscribe for this publication through the Superintendent of Documents, Washington, D. C., at the domestic rate of 25 cents per year, and 40 cents per year to foreign addresses, payable only by postal money order or cash. No checks accepted.

The Market Reporter. Vol. 2, Nos. 22-25, inclusive, December, 1920. (Bureau of Markets.) For free distribution to applicants who show the need for it.

The Market Reporter is the official marketing publication of the United States Department of Agriculture. It contains general, current, and statistical marketing information for important classes of agricultural products, both staple and perishable, which is of general interest and of permanent value alike to producers, dealers, and consumers.

Weekly News Letter.

Contains a weekly summary in popular form of the more important practical discoveries and recommendations of all bureaus of the department. Free list confined to departmental employees, official cooperators, and the press. May be purchased from the Superintendent of Documents, Government Printing Office, for 50 cents a year.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Rock County, Wisconsin. By W. J. Geib, in charge, and Arthur E. Taylor, of the U. S. Department of Agriculture, and Guy Conrey and W. M. Gibbs, of the Wisconsin Geological and Natural History Survey. Pp. 51, fig. 1, map 1. (From F. O. Soils, 1917.) Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 48, No. 9. September, 1920. [Dec. 8, 1920.] Pp. 495-564, figs. 16, charts, 16. Price, 25 cents a copy, \$2.50 a year, payable to the Superintendent of Documents.

Special articles: Some further uses of the climograph. By B. M. Varney.—Climate and its relation to acute respiratory conditions. By E. Nichols.—Colds and their relation to the physics of the atmosphere. By C. M. Richter.—Irregular atmospheric refraction at high altitudes. By E. R. Miller.—Cloud nomenclature. By C. F. Brooks.—Life History of tropical storm in Louisiana, September 21, 1920. By I. M. Cline.—Typhoon in Philippines. By J. Coronas.—Climatological factors governing the selection of air routes and flying fields. By C. L. Meisinger.—Distribution of weather forecast, warnings and information by radio.—The glacial catastrophies in the valley of Chamonix in the 17th century and the variations of climate. By C. Rabot.—Invertions of temperature in the lower layers of the atmosphere in the Antarctic. By J. Rouch.

National Weather and Crop and Snow and Ice Bulletin. Nos. 49, 50, 51, 52, December, 1920, reporting weather and crop conditions throughout the United States. Issued weekly. Price, 25 cents a year.

Note.—This bulletin is furnished free of charge to public and educational institutions, libraries, newspapers, cooperative observers, weather correspondents, and to those who will post or display it for the general benefit of the public. To all others the price is 25 cents per year, payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

JOHN L. COBBS, Jr., Chief, Division of Publications.